

A Critical Analysis of the Usage of Herbal Products Amidst South Indian Population for the Treatment of Alopecia

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This article describes herbal remedies and herbal products for alopecia. It mainly states the use of herbal preparations for the treatment of hair loss and also describes their advantages over synthetic products and drugs. As the use of herbal blends have least side effects, maximum efficacy, and are economically and easily prevalent, they can act as naturopathic medicines in treating various types of hair loss. Hair loss can be due to different reasons such as genetic tendency, extreme stress, nutritional deficiency, environmental triggers, exposure to chemicals etc. Hence use of synthetic compounds can show unfavorable outcomes such as scaling, dermatitis, pruritus and other skin related problems and to overcome such effects herbal products which are made by extraction of natural compounds mainly herbs are preferred as they play a role in patient compliance and show more than one mode of action for the treatment of alopecia. The article basically gives the description of various herbal products, remedies and also herbal products with nutrient supplements available with their brand name, manufacturing details along with their cost, indications which can be beneficial to treat hair loss.

Keywords: Alopecia; Herbal products, Herbal medicines, Nutritional supplement; Remedies; South Indian; Treatment.

Alopecia areata is an autoimmune illness that causes your hair to fall out, frequently in quarter-sized clumps. This illness, which can result in hair loss anywhere on the body, is brought on when the body assaults its own hair follicles, where hair grows. A round or oval bald patch appears on the scalp in many cases of alopecia areata. It can start at any age, but most people develop it during their childhood or adolescence. It is much more common in men. Alopecia, a dermatological condition that has been known about for more than 2000 years, is a frequent issue in both aesthetic and general medical settings. It is widespread throughout the world and is thought to impact

0.2% to 2% of everyone on the planet¹⁻². Although the primary form of alopecia areata is the most prevalent, more uncommon types are mentioned as:

Alopecia totalis: In which the person loses all hair on the scalp, resulting in a completely bald scalp.

Diffuse alopecia areata: Is characterized by sudden hair thinning rather than lost patches.

Ophiasis alopecia areata: Is characterized by hair loss in a band around the sides and back of your head.

Symptoms

Hair loss is the most common symptom of

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alopecia areata. Typically, hair falls out in patches on the scalp. These patches are frequently a few centimeters in size or less.

Other parts of the face, such as the brows, eyelashes, and beard, as well as other parts of the body, may experience hair loss. Some people only lose hair in a few areas. Others drop it in multiple places.

Minor bald spots on your scalp or other parts of your body are possible with skin lesions that tingle, burn, or itch just before a person's hair falls out. There are also a few scattered short coloured or white hairs within the hairless patch.

Causes

Alopecia areata is a type of autoimmune disorder. This means that your immune system has misidentified a part of your body and is attacking it. Immune system cells surround and attack the hair follicles in alopecia areata patients. When a hair follicle is attacked, the attached hair falls out. The more hair follicles your immune system destroys, the more hair loss you will experience. Apart from this, the most common cause of hair loss is an inherited disorder that develops with age. Because of physical and emotional trauma, changes in hormones and negative effects of certain medications may also lead to excessive hair loss. Another cause of hair loss is excessive keratin treatments and hair styling which leads in reducing hair volume along with damage of hair follicles.

Description

Herbal Remedies

There isn't a magic pill to grow hair, but studies have shown that several herbs can either halt hair loss or encourage new growth. It might be safe to utilize herbal medicines as a topical hair treatment³⁻⁴. Your hair follicles and hair development can be stimulated by massaging your scalp and applying an herbal serum, hair mask, or hair conditioner. Below, we've discussed a few herbs and their treatments that may strengthen hair, enhance scalp health, increase hair thickness, or speed up the hair development cycle.

Herbal remedies for hair loss

The table 1 basically describes how herbs such as jatamansi, shatavari, methi, garlic etc. can be used for treating hair loss naturally and also shows their indications. These herbal remedies have been found to play a main role in strengthening hair follicles

and increasing blood circulation into the scalp, thus encouraging hair growth.

Herbal remedies for hair loss

The table 2 describes how herbs such as hibiscus, onion, karpooravalli etc., encourages hair growth and helps in scalp therapy naturally for treating hair loss⁵. Among the below herbs hibiscus have been found to show maximum efficacy in treating alopecia through herbal remedy.

Herbal Products

There are currently many synthetic treatments for alopecia, including corticosteroids, dithranol, tretinoin, minoxidil, zinc, systematic cortisone, irritants, immuno-suppressive medications, finasteride, and azelaic acid, but neither a single drug nor a combination of drugs is providing patients with alopecia with satisfactory and long-lasting results. Additionally, using these synthetic substances has been linked to a number of negative side effects, such as erythema, scaling, pruritus, dermatitis, itching, etc. As a result, we've gone into nature's wealth to find a variety of herbs that have a track record of successfully treating alopecia in order to deal with the problem of hair loss. The postulated mechanisms of action of herbal medicines include nutritional support for the products as well as increased scalp blood circulation⁶⁻⁹.

Various studies (mainly randomized, placebo-controlled) have been conducted on plants and plant-derived compounds to support their efficacy in treating hair loss. Curcuma aeruginosa (pink and blue ginger), Serenoa repens (palmetto), Cucurbita pepo (pumpkin), Pilocarpus (jaborandi), and Panax ginseng are the plants having the strongest evidence-based efficacy against alopecia¹⁰.

The currently available synthetic drug-based conventional therapy for hair loss is still not perfect and has a number of drawbacks. It has generated more interest in less harmful alternative treatments, such as herbal formulations and/or their active ingredients. The current state of knowledge regarding topically applied herbal products for the treatment of hair loss collected on the basis of preclinical and clinical trials was compiled for this purpose using a number of electronic databases and hand-searched references. Additionally, their mode of action, follicular penetration, advantages

and disadvantages of herbal products for alopecia is described along with manufacturing details, cost, dose and indications¹¹⁻¹³.

Hair Oil

Herbal hair oil products may contain a variety of herbal extracts or botanicals. Herbal hair oil is a product with an oil basis made from herbs with the goal of enhancing hair development. These frequently claim to help with hair damage

or growth. Oils like olive oil, jojoba oil, grapeseed oil, and almond oil may enhance hair elasticity and guard against dryness and damage.

Hair Shampoo

Shampoos made with active herbal elements unquestionably prevent hair shaft damage in addition to cleaning the scalp. Whatever the illness or condition—dermatitis, alopecia, for example—it is preferable that the hair strands be kept visually

Table 1. Details of Remedies used by South Indian Population

No	Herbs	Indications	Remedy
1.	Jatamansi	Extends the hair's growth phase and strengthens it.	The powder is mixed with neem oil and applied to the scalp.
2.	Shatavari	By increasing blood circulation, it strengthens hair.	Make a fine paste by combining Shatavari Powder with 1 tablespoon of milk.
3.	Fenugreek [Methi]	Prevents hair fall and strengthens hair	They could be combined with some water or lemon juice.
4.	Bhringraj	Heals baldness and encourages hair growth.	Take a few bhringraj leaves and cut them up finely. Add 1/2 cup of coconut oil in a pan before adding the chopped leaves.
5.	Tea Tree	Helps in faster hair growth.	For every teaspoon of carrier oil like olive, almond, or coconut oil, add 2 to 5 drops of tea tree oil. Mix thoroughly, then rub into the scalp
6.	Garlic	By increasing collagen production, it promotes hair growth and prevents hair loss.	Squeeze the juice from a few garlic cloves. Stir in the coconut oil and cook on a low heat.

Table 2. Details of Remedies used by South Indian Population

No	Herbs	Indications	Remedy
1.	Hibiscus	Hibiscus encourages strong hair and fights hair loss when applied frequently.	Combine 5 crushed hibiscus flowers with 1/4 cup pure coconut oil. Mix thoroughly and apply to a slightly damp scalp and hair.
2.	Honey & lemon	Helps in clearing the scalp of debris	Rub a small amount of honey and a few drops of lemon on your scalp.
3.	Rice	It contains amino acids, which aid in hair rejuvenation	Instead of applying a conditioner after bathing your hair, rinse it with rice water.
4.	Onion	Onion juice's Sulphur content encourages hair growth.	Twice daily, directly apply onion juice to the scalp. Also, when applied simultaneously, the juice of fresh garlic and fresh onions does wonders for the hair.
5.	Karpooravalli	Promotes hair growth, prevents dandruff	Make a thick paste of karpooravalli leaves, add 1 tsp henna powder and gooseberry powder, add honey to the mixture and then apply it to the scalp.
6.	Licorice	It works well as a growth promoter and scalp therapy.	One cup of milk should be coupled with a tablespoon of crushed licorice root and a 1/4 teaspoon of saffron to create a paste.

Table 3. Available Herbal products in South Indian market

No	Source	Product	MFG	MRP	Indication
1.	Arnica Montana	GrooX Arnica Herbal oil	Future Retails, Indra Vikas, Delhi, India.	698/- INR	Hair growth, Anti-Dandruff, Anti hair fall.
2.	Cedarwood	RAS Luxury Oils cedarwood pure essential oil	RAS Beauty Pvt Ltd, Chhattisgarh, India.	400/INR	Naturally reduces dandruff and hair fall
3.	Lavender	Aroma Magic Hair Fall Control Shampoo	Blossom Kochhar Beauty Products Pvt. Ltd. India	215/-INR	Balance the pH levels of the scalp and strengthen hair strands
4.	Tulsi	RS Tulsi Ayurvedic Cool Hair Oil	R.S. Shukla and Sons, Uttar Pradesh, India.	200/-INR	Reduces hair fall and stimulate hair follicles.
5.	Jaborandi	Wheezal Jaborandi Hair Treatment Oil	Wheezal Homoeo Pharma, Dehradun, India.	380/-INR	Nourishes the scalp and hair follicles and maintains healthy blood flow to the scalp.
6.	Pumpkin Seeds	Nuerma Science Pumpkin Seed Oil	Nuerma Science, Haryana, India.	449/-INR	Reduces hair loss and makes hair glossy and voluminous.
7.	Jojoba	Dr.Batra's Hair Oil	Dr. Batra's positive health products Ltd. Maharashtra, India.	135/-INR	Moisturizes scalp and nourishes hair follicles.
8.	Licorice	7Days Alopecia Treatment hair Oil	-	325/-INR	Stop hair from falling

Table 4. Available Herbal products in South Indian market

No	Source	Product	MFG	MRP	Indication
1.	Rosemary	Weleda Rosemary Hair Oil	Weleda Group, Arlesheim, Switzerland	\$17.99	Deep conditioning and nourishes the scalp.
2.	Thyme	Khadi Natural Thyme Henna Hair Tonic	Khadi Naturals Health, New Delhi, India.	375/-INR	Makes your hair stronger and prevents hair fall.
3.	Onion	Biotique Onion Black Seed Shampoo	Bio Veda Action Research Pvt. LtdHimachal Pradesh, India.	231/-INR	Reduces hair fall by promoting blood circulation which further helps in hair regrowth.
4.	Garlic	Haironic Hair Science Garlic Hair Oil	West Coast Pharmaceuticals Works Ltd, India.	225/-INR	Infuse the hair with extra strength and make your scalp cleaner and healthier with regular use.
5.	Tea	Ayurdaily Tea Tree Hair oil	Vanshi khadi herbal products, India.	399/-INR	Makes hair follicles more receptive to nutrition and this promotes overall hair growth.
6.	Ginger & Black Pepper	Osadhi Ginger & Black Pepper Hair Oil	Osadhi Skin Products Pvt Ltd, India.	499/-INR	Helps in hair Strengthening, Hair Growth and makes scalp stronger.
7.	Bhringraj	Indulekha Bringha Ayurvedic Shampoo	Unilever House, Maharashtra, India.	135/-INR	Reduces Hair Fall and helps in growth of new hair
8.	Ginkgo biloba, Shatavari	Pratha Shampoo bar	Sapon Products LLP, Maharashtra, India.	285/-INR	Encouraging healthy hair regrowth, nourishing damaged hair follicles and cells in the scalp.

Table 5. Available Herbal products in South Indian market

No	Source	Product	MFG	MRP	Indication
1.	Ginkgo Biloba & Saw Palmetto	Max Glow Ginkgo Biloba & Saw Palmetto Shampoo	Jainsons Herbo Labs Pvt. Ltd, Uttar Pradesh, India.	650/-INR	Daily Care, Hair Shine, Anti-hair Fall
2.	Hibiscus & Methi	Alps Goodness Hibiscus & Methi Powder for hair	Raj Herbs, Rajasthan, India.	160/-INR	It strengthens the hair follicles and promotes hair growth.
3.	Jatamansi	Marico Jataa For Men	Marico Ltd, Coimbatore, Tamil Nadu, India.	250/-INR	Strengthens hair follicles
4.	Red Ginseng	Ayurvedic Hair Fall Oil Himavat Red Ginseng Hair Oil	Aloecare Arogya Life, Rajasthan, India.	379/-INR	Increase the dermal cells on the scalp which, in turn, strengthens the follicles.
5.	Henna & Ginseng	Jovees Henna & Ginseng Anti Hair Loss Shampoo	Jovees Herbal Care, Uttarakhand, India.	170/-INR	Strengthens the follicles and roots of the hair
6.	Saw Palmetto	AOS Pure Saw Palmetto Oil	AOS PRODUCTS, Ghaziabad, Uttar Pradesh, India.	896/-INR	It strengthens the hair follicles and promotes hair growth.
7.	Stinging Nettle	Uhuru Naturals Nettle Oil	Uhuru Naturals	\$14	Helps in combating hair loss, also helps in hair regrowth.
8.	Ashwagandha	Vedacharya Adivasi Herbal Hair Oil	Altis Life Sciences, Himachal Pradesh, India.	1498/-INR	Controls hair fall & reduces dandruff.
9.	Embllica officinalis	Amrit Navjeevan Herbal Hair Oil	Pratiraj Herbal Pharmacy, Uttar Pradesh, India.	210/-INR	Promotes hair growth, Removes dandruff.

Table 6. Nutritional products available in South Indian market

No	Source	Product	MFG	MRP	Indications
1.	Aloe Vera	Herbal Essences Bio: Renew eucalyptus and potent aloe scalp balance shampoo.	Procter & Gamble manufacturing, Thailand.	\$5.99	Keep your hair hydrated while balancing your scalp. Nourishes dry hair, leaving it silky & soft.
2.	Amla	Kapiva Hair juice	Velocce Herbals Private Limited, Madhya Pradesh, India.	1329/-INR	Strengthens hair follicles & enhances scalp health, reduces hair thinning
3.	Amaranth	Amarantha Hair Oil	Ari Healthcare Pvt. Ltd. Maharashtra, India.	400/-INR	It is used to strengthen the hair follicle and reduce hair fall
4.	Avena sativa [Oats]	1 Fl Oz Avena Sativa Kernel, Oat Oil.	—	\$ 14	Nourishes and repairs hair from the root To improve conditioning and manageability. Recommended for all hair types, but particularly for dry or damaged hair or flaky scalp.
5.	Brahmi	Herb Essential Brahmi hair oil for healthy scalp	Jain life sciences. Pvt. Ltd, Hyderabad, India.	390/-INR	Hair growth, nourish your hair follicles.
6.	Chickpea & Amla	Himalaya protein hair cream	The Himalaya Drug Company, Bengaluru, India.	162/-INR	Effectively nourishes the hair Prevents dandruff Makes hair strong

Table 7. Nutritional products available in South Indian market

No	Source	Product	MFG	MRP	Indications
1.	Carrots	Neud Carrot Seed Premium Hair Oil	MOD Wellness & Care LLP, Haryana, India.	500/-INR	Prevent damage to hair shafts due to UV rays and pollution
2.	Walnuts	BIOTIQUE Advanced Ayurveda Walnut Volume & Bounce Shampoo and Conditioner	Bio Veda action research company, Himachal Pradesh, India.	120/-INR	Revives hairs for a fuller, thicker lifted look. Stimulate hairs from root to tip
3.	Alfalfa	Alps Goodness Alfalfa Leaf Powder for skin and hair	Raj herbs, Rajasthan, India.	151/-INR	Hair detoxifier and reduces hair breakage. Improve hair elasticity
4.	Pelvetia canaliculata	Bionnex Anti hair loss conditioner	Bionnex, Italy.	—	Improves scalp and prevents hair loss
5.	Almonds	Mamaearth Almond Hair Oil with Cold Pressed Almond Oil & Vitamin E	A.G Industries, Uttar Pradesh, India.	399/-INR	Boosts healthy hair growth and deeply nourishes hair

pleasing, retaining their softness and compatibility while curing the scalp.

Hair Tonic

Alopecia, or hair loss, is treated with the help of active herbs found in herbal hair tonics. A hair tonic is made specifically to aid in boosting blood flow to the hair follicles to promote healthy hair growth. An herbal hair tonic hydrates a dry scalp and lessens breakage and split ends, regardless of whether your hair is thinning, splitting apart at the ends, or falling out more frequently than usual.

Hair Cream & Hair Gels

Herbal oils and water are often utilized to make herbal creams. Compared to herbal ointments, they have less oil and more water, and your skin may readily absorb them.

Herbal extracts are combined with a gel base in herbal gels. Typically, they don't have oil in them.

Advantages of herbal hair products

The main advantage of herbal hair products is that there is no use of harmful chemicals in their preparations. These products are generally recyclable and biodegradable hence, they are ecofriendly. They remove dirt from the scalp without removing the natural oils that are essential for a healthy scalp hence, they strengthen hair follicles and prevents hair loss. The herbs which are used for making herbal hair products are widely accessible, inexpensive, and come in a wide variety leading to an economically friendly product for treating hair loss.

Disadvantages of herbal hair products

The main disadvantage of herbal hair products is their storage as herbs can be harmed by moisture hence it is advised that these products should always be kept in a dry and cool place. Also storing herbal hair products for extended period of time, especially in the presence of sunlight may promote the growth of bacteria and fungi. Another disadvantage is production of herbal hair products which is a labor-intensive and time-consuming process hence it is a challenging process. Apart from this, it has been identified that the use of herbal hair products for treating hair loss is an on going treatment.

Herbal products for alopecia: The table 3 describes some of the hair products which are made by extraction of natural substances such as

herbs like cedarwood, Arnica Montana, jaborandi etc. The products include hair shampoos, hair conditioner, hair oil etc. obtained by various herbs which are described below for alopecia.

Herbal products for alopecia: The table 4 describes some of the hair products which are made by extraction of natural substances such as herbs like Rosemary, Onion, Tea, Garlic, Bhringraj, Shatavari etc. Rosemary has been found to be the most common herb used for preparation of herbal products for alopecia. Additionally, this herbs not only helps in hair regeneration but also clear the scalp and strengthen the hair follicles¹⁴⁻¹⁵.

Herbal products for alopecia: The table 5 describes some of the hair products which are made by extraction of natural substances such as herbs such as Saw Palmetto, Stinging Nettle, Jatamansi, Red Ginseng, Emblica officinalis etc. Among them it has been studied that Stinging Nettle herbal extraction which is used to make hair products, increases dermal papilla cell growth and also it is beneficial for skin as well as for hair growth¹⁶.

Herbal products providing nutritional support: The table 6 describes some of the products which are generally made by extraction of herbs which have national value along with medicinal value for the treatment of alopecia. These products have been a source for nutritional supplement in regeneration of hair follicles for hair growth¹⁷.

Herbal products providing nutritional support: The table 7 describes some of the products which are mainly made by extraction of herbs having nutritional value, which help in boosting hair growth and nourishing the scalp. These herbs contain nutrients such as vitamin A, as in carrots. Almonds have been a good source of vitamin E, magnesium, and riboflavin, and walnuts have been a good source of folic acid and vitamin E. Hence, the mentioned products are useful in supporting hair growth¹⁸.

DISCUSSION

Some of the herbal treatments that are effective for treating alopecia are shown in the data gathered in 2.1. Because they encourage quicker hair development, herbs like bhringraj and hibiscus have been shown to be the most popular herbal treatments for hair loss¹⁹⁻²¹. These remedies have been widely used by locals belonging to South

Indian states. Based on their regional availability and also on their cost, products made from herbs including amaranth, amla, stinging nettle, jatamansi, ginkgo biloba, shatavari, rosemary, licorice, etc., have been frequently used as shown in 2.2. Products like Dr. Batra's Hair Oil, Himalaya Protein Hair Cream, Indulekha Bringha Ayurvedic Shampoo, Marico Jataa for Men Ayurvedic Hair Fall Oil, and 7Days Alopecia Treatment Hair Oil are readily available in South Indian markets at affordable pricing for customers²²⁻²⁵. These products are clinically approved and tested by the authorities. Hence, chances for showing adverse side effects and reactions are minimal or none. Numerous herbal products for the treatment of alopecia, such as 1 Fl oz Avena sativa kernel [Oat Oil], Herbal Essences Bio: Renew eucalyptus and potent aloe scalp balance shampoo, Uhuru Naturals Nettle Oil, and Weleda Rosemary Hair Oil, are produced in other nations and distributed globally. These products are easily accessible to consumers in online markets. In recent years the use of herbal hair products have been widely increased as they are cheap, easily available, biodegradable and can be manufactured easily with low cost. The purchase and use of herbal hair products among South Indian population is most demanding than the synthetic marketed hair products as they are pocket friendly and are free of harmful chemicals which can damage your hair follicles and scalp.

CONCLUSION

The aforementioned information leads to the conclusion that the usage of herbal products and therapies can be used as natural medicines to treat many types of hair loss because they are inexpensive, readily available, and have few side effects. The article provides details on the most effective alopecia treatment options in terms of formulations, products, and remedies. Additionally, the products indicated in the data above include herbal extracts and nutritional supplements that help accelerate hair growth. As a result, the products listed along with their brand name, price, manufacturing information, indications, and other information can aid consumers in making the best decision from all the treatments available for treating different types of alopecia.

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Conflict of interest:

Authors declare that there is no conflict of interest.

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