Subscription Agency
Exploring and Distributing Knowledge Globally

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

A Review on Natural Herbs for Hair Growth

Shubham[1], Vishal[1], Neha Batra[2]
[1]Lala Birkha Ram College of Pharmacy, Golpura, Panchkula, Haryana
[2]Associated professor, LBR College of pharmacy, Golpura, Panchkula, Haryana.

Corresponding Author
Email Id: riyarana20001@gmail.com

ABSTRACT

Phytochemicals are increasingly used in hair care products due to their potential benefits for hair growth, strength, and texture. This review article discusses the natural ingredients used in hair care products, including herbs, essential oils, and plant extracts. The article highlights the benefits of using phytochemicals in hair care, including their ability to promote hair growth, reduce, dandruff, and improve scalp health. Overall, this review article provides a comprehensive overview of phytochemicals in hair care and highlights their potential benefits for promoting healthy hair.

INTRODUCTION

Plants and herbs have been traditionally used in hair care and hair growth since ancient times in the Ayurveda, Chinese, and Unani systems of medicine. [1,2] Many botanical extracts and formulations have been used in daily hair care routines.[3]

Hair shampoos from natural renewable sources are more eco-sustainability, easily available, and possess bioactivities such as antioxidant, antibacterial, antifungal, anti-inflammatory, and other medicinal properties. [4,5]

Hair

Hair is one of the characteristic features of mammals and has various functions such as protection against external factors i.e. heat, cold, etc. Hair is one of the important parts of the body considered to be a protective appendage on the body and accessory structure of the integument along with the sebaceous gland and sweat gland. The basic parts of the hair are the bulb, root, and shaft. Hair fall, dandruff, lice, split end, and grey hair are some of the well-known problems related to hair.

Hair Follicle

The hair follicle is where hair begins to grow and where it is held in place. It is a stocking-like structure that starts in the epidermis. It extends to the dermis. The follicle is lined by an inner and outer sheath that protects and molds the growing hair and ends just before the opening of the sebaceous gland.

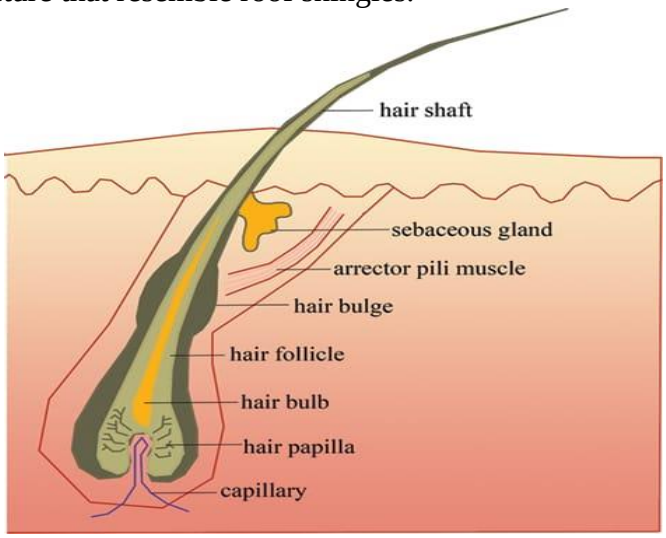
Hair Shaft

The hair shaft is the part of the hair that is made up of three layers of keratin. Those layers are;-

1) **The inner layer:** Also called as medulla. Depending on type of hair, the medulla is not always present.
2) **The middle layer:** This is called the cortex which makes up the majority of the hair shaft.

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

3) **The outer layer:** Also called as cuticle, which is formed by tightly packed scales in an overlapping structure that resemble roof shingles.



Hair Types

Hair type is primarily based on hair's curl pattern. The amount of curl in the hair is determined by the hair follicle. Hair type is determined by genetics.
Type 1: Straight
Type 2: Wavy
Type 3: Curly
Type 4: Coily

Benefits of Herbs

Products made from natural sources, like plants or algae, are known as phytocosmetics. Extracts, essential or fixed oils, or unstructured materials (such as resins, waxes, fats, etc.) that serve as the product's active ingredients are examples of natural components in phytocosmetics. In addition to protecting the scalp from mechanical abrasion and sunlight, hair enhances people's well-being. To cure and shield the hair fiber from everyday external hair aggressions, it is crucial to design hair care formulas. The main purpose of aims formulae is to enhance the physical characteristics of the hair fiber, such as its combability, strength, and texture. Enhancing sensory qualities like brightness, smoothness, frizz reduction, and hair film creation are the secondary purposes. Individuals' skin and hair beauty can be influenced by their health, lifestyle, regular jobs, climate, and upkeep. Excessive heat exposure throughout the summer dehydrates the skin, resulting in wrinkles, freckles, blemishes, pigmentation, and sunburns. Cracks, wounds, maceration, infections, and hair loss are all signs of damage to the skin and hair caused by the harsh winter. Herbs and essential oils used in cosmetics shouldn't be utilized to have any therapeutic effects or penetrate the skin's outer layers.

Shikakai

Shikakai is a climbing shrub, from the Fabaceae family. This plant is commonly cultivated in Asia, especially in central and southern India. Shikakai's pods are traditionally used as a natural detergent for hair cleansing. The pods are rich in saponins which are natural cleaning agents. The saponins are triglycerides of acacia acid, made up of varieties of saccharine derivatives.[6]

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Synonym-Soap -pod, *Acacia concinna*.
Biological Source: It is the dried gummy exudation of stem and branches of *Acacia Arabica*
Family- Leguminosae.
Organoleptic Characters
Color-dark brown
Odor-odorless
Taste-Pungent

Uses
1) It is traditionally used in shampoo preparation for hair growth.
2) Soothes Scalp.
3) Fights Dandruff. Shikakai also has antifungal properties[7,8]

Ritha

Sapindus mukorossi (reetha or soapnut) is native to warm temperate regions, tropical and subtropical Asia, and belongs to the Sapindaceae family.[9,10] Reetha is a natural surfactant that could be included in plant-based shampoos. The fruit pericarp is rich in saponins (10–11 %).[11]

Synonym- Soap nut, Aritha
Biological sources consist of the dried as well as fresh fruits of the species *Sapindus mukorossi*
Family- Sapindaceae.
Organoleptic Characters
Color-Brick red
Odor-Aromatic

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Taste-Pungent
Shape- Circle
Uses

1) Cleanses the skin of oily secretion and is even used as a cleanser for washing hair.
2) Seeds of *Sapindus mukorossi* are used in Ayurvedic medicine to remove tan and freckles from the skin.
3) *Sapindus mukorossi* can also be used as a natural remedy for many health problems, such as for treating migraine headaches.
4) It is widely used in Ayurveda for poison cases.

Amala

Phyllanthus emblica is an important medicinal plant in the Indian traditional system of medicine. The tree is 1-8 meters in height. The leaves are simple and intently set alongside branchlets. The flowers are of greenish yellow color. The fruit is nearly round and has a hard appearance.[12]

Synonym- Embica, Indian gooseberry, Amalki
The biological source consists of dried as well as fresh fruits of the plant *Embica officinalis Linn.*
Family -Euphorbiaceae.
Organoleptic Characters
The green color changes to yellow or brick red at maturity.
Odor-odorless
Taste-sore and astringent
Shape- fruits are depressed, and globular.

Uses

1) It provides natural protein.
2) It is used as an acrid, diuretic, refrigerant, and laxative.
3) They are also administered for jaundice, dyspnea, and anemia along with iron compounds.
4) Fruits are also used in the preparation of inks, hair oil, and shampoo.

Tulsi

Tulsi is one of the most well-recognized herbs from the family Lamiaceae that is indigenous to the Indian subcontinent and has been used in Ayurvedic medication for over 3000 years. Leaves of tulsi are a nerve tonic a nerve tonic and also sharpen memory.[13]

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Synonym- sacred basil, Holy basil
The biological source consists of fresh and dried leaves of *Ocimum Sanctum Linn.*
Family – Laminaceae.
Organoleptic Characters
Color-green
Odor-aromatic
Taste-slightly pungent

Uses
1) As a preservative.
2) As an antioxidant.
3) Leaves are used as stimulants, aromatic, anticatarrhal, and diaphoretic.

Hibiscus

The leaves are alternate, ovate to lanceolate, frequently with a toothed or lobed margin. The flowers are large conspicuous, and trumpet-shaped with five or more petals. This plant is extensively cultivated as an ornamental plant in tropical and subtropical regions.[14,15]

Synonym- *Rosa-sinensis*
Biological source- The Hibiscus flowers are large and showy, and the genus grows into herbs, shrubs, or small trees.
Family- Malvaceae

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Organoleptic Characters
Colour- Purple
Taste- Slight sweet and mucilaginous

Uses
1) Stops hair loss.
2) Prevent premature graying.
3) Thick hair and add volume.
4) Treat dandruff.

Neem

Neem trees are found commonly in India, Africa, and America. Due to having medicinal properties, it has been used in Ayurvedic medicine for 4000 years. It is a fast-growing tree and can reach a height of up to 15-20 meters.[16,17]

Synonym- *Azadirachta indica*
Biological source- The biological source of neem is the *Azadirachta indica* tree, which is native to India and Southeast Asia.
Family- Meliaceae
Organoleptic Characters
Colour- Dark green and glossy
Odor- Characteristic odor
Taste- Bitter taste

Uses
1) Cure scalp problems.
2) Makes lustrous and healthy hair.
3) Promotes thicker, stronger hair growth.
4) Prevents premature greying.
5) Cooling and soothing effect.

Aloe vera

Aloe vera is a stemless or very short-stemmed plant growing to 60-100 centimeters tall. Leaves are thick and fleshy, grey to green. Aloe vera is a species of Aloe that is particularly known for its medicinal properties.[18,19]

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Synonym- Aloe flava Pers., Aloe Ianzae Tod.
Biological source- The biological source of aloe vera is the dried latex of the leaves of the Aloe barbadensis miller plant.
Family- Aphodelaceae

Organoleptic Characters
Color- clear colorless, viscous liquid.
Odor- honey odor.

Taste- slightly bitter taste.

Uses
1) Strengthen and repair hair strands.
2) Deep cleans oily hair.
3) Calms an itchy scalp.

Coconut Oil
Coconut oil is derived from the milk of the coconut palm fruit. Coconut oil is used as a meal oil and is used in industrial applications for cosmetics and detergent production. [20]

Synonym- Cocos nucifera
Biological source- It is a monoecious perennial tree that is native to the humid tropics.
Family- Arecaceae
Organoleptic Characters
Smell- fresh nutty or sweet aroma
Taste- coconut like sweet, acidic, or salty

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

Uses
1) Masks hair.
2) Moisturizes hair.
3) Seal hair.
4) Makes hair look shinier**.**

Onion

The onion also known as the bulb onion or common onion, is a vegetable that is the most widely cultivated species of the genus Allium. The onion plant has been grown and selectively bred in cultivation for at least 7000 years. Onion has been valued as a food and a medicinal plant since ancient times.

Synonym- Allium Cepa
Biological source- The biological source of onion is the plant Allium cepa**,**
Family- Amarylidaceae

Organoleptic Characters
Odor- characteristic smell
Texture- hardness, springiness, cohesiveness, and gumminess

Uses
1) Treats dandruff.
2) Inhibits hair thinning.
3) Fights scalp infection.
4) Slows down premature greying.

CONCLUSION

Phytochemicals have been increasingly recognized for their potential benefits in promoting hair growth, strength, and texture. This review article highlights the natural ingredients used in hair care products, including herbs, essential oils, and plant extracts.

The benefits of using phytochemicals in hair care are numerous, including promoting hair growth, reducing dandruff, and improving scalp health. Overall, the use of phytochemicals in hair care offers a natural and effective approach to promoting healthy hair.

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

REFERENCES

1) Gamage D.G.N.D., Dharmadasa R.M., Abeysinghe D.C., Wijesekara R.G.S., Prathapasinghe G.A., Someya T. Ethnopharmacological survey on medicinal plants used for cosmetic treatments in traditional and Ayurveda systems of medicine in Sri Lanka. Evid. Based Complement. Alternat. Med. 2021:2021. doi: 10.1155/2021/5599654.
2) 58. Patel S., Sharma V., S Chauhan N., Thakur M., Dixit V.K. Hair growth: focus on the herbal therapeutic agent. Curr. Drug Discov. Technol. 2015;12:21–42. doi: 10.2174/1570163812666150610115055.
3) Sang SH, Akowuah GA, Liew KB, Lee SK, Keng JW, Lee SK, Yon JA, Tan CS, Chew YL. Natural alternatives from your garden for hair care: Revisiting the benefits of tropical herbs. Heliyon. 2023 Nov 7;9(11):e21876. doi: 10.1016/j.heliyon.2023.e21876. PMID: 38034771; PMCID: PMC10685248.
4) Guzmán E., Lucia A. Essential oils and their components in cosmetic products. Cosmetics. 2021;8:114.
5) Giustra M., Cerri F., Anadol Y., Salvioni L., Antonelli Abella T., Prosperi D., Galli P., Colombo M. Eco-luxury: making sustainable drugs and cosmetics with Prosopis cineraria natural extracts. Front. Sustain. 2022;3.
6) Das D., Sarangi A.K., Mohapatra R.K., Parhi P.K., Mahal A., Sahu R., Kudrat-E-Zahan M. Aqueous extract of Shikakai; a green solvent for oxidation reaction: mechanistic approach from experimental to theoretical. J. Mol. Liq. 2020;309.
7) Vinay Kumar Medisetti, Ganga Rao Battu, Ravindra.S, Sandhiya R.S, R.V.Subbarao, Antibacterial and Antihelmintic Activities of Aqueous Extract of Acacia Conconna Linn, Indo-American Journal of Pharmaceutical Sciences, ISSN: 2349-7750.
8) Siddhi S. Jadhav, Kajal S. Jadhav, Yogita V. Dalvi, Formulation and Evaluation of Herbal Liquid Shampoo, Research J. Topical and Cosmetic Sci.9(2): July-Dec. 2018.
9) Pradhan A., Bhattacharyya A. Quest for an eco-friendly alternative surfactant: surface and foam characteristics of natural surfactants. J. Clean. Prod. 2017;150:127–134.
10) Patil D.A., Rasve V.R., Ahemad S.S., Shirsat M.K., Manke M.B. Phytochemical analysis of methano extract of Emblica offinalis leaves. World J. Pharm. Pharmaceut. Sci. 2018;7:971–978.
11) National Park of Singapore. Emblica officinalis Gaertn. Available online: (accessed on 31 March 2023).
12) Bhat H., Sampath P., Pai R., Bollor R., Baliga M., Fayad R. Indian medicinal plants as immunomodulators: scientific validation of the ethnomedicinal beliefs. Bioactive Food as Dietary Interventions for Arthritis and Related Inflammatory Diseases: Bioactive Food in Chronic Disease States. 2012;22:215. Lopamudra Sethi, Preetha Bhadra, A Review Paper on Tulsi Plant, International Journal of Natural Science, Vol.10/ ISSUE 60/June/2020, ISSN: 0976-0997.
13) Vincenta Khristi and V.H. Patel, Therapeutic Potential of Hibiscus Rosa Sinensis: A Review, International Journal of Nutritional and Dietetics, Volume 4, 2016, ISSN: 23475277.
14) Shrinivas K Sarje, Shital Narwade, Mahesh Thakur, Nitin B Ghiware, Pharmacognistic and Pharmacological review on herbal plant: Hibiscus rosa sinensis Linn, International Journal of ChemTech Research, Vol.12, ISSN: 0974-4290, ISSN (online) : 2455-9555.
15) Sharma Pankaj, Tomar Lokeshwar, Bachwani Mukesh, Bansal Vishnu, Review on Neem (Azadirachta Indica): Thousand Problems One Solution, International Research Journal of Pharmacy, ISSN:2230-8407, 2011 20.

Journal of Advancement in Pharmacognosy
Volume 5 Issue 1, 2025
ISSN: 2582-8401

16) Mohammad A. Alzohairy, Therapeutic Role of Azadirachta indica (Neem) and Their Active Constituents in Diseases Prevention and Treatment, Evid Based Complement Alternat Med. 2016.
17) Malik Itrat, Zarnigar, Aloe Vera: A Review of Its Clinical Effectiveness, International Research Jornal of Pharmacy, ISSN: 2230-8407, 2013 23.
18) Maharajan H. Radha, Nampoothiri P. Laxmipriya, Evaluation of Biological Properties and Clinical effectiveness of Aloe Vera: A Systematic Review, Journal of Traditional and Complementary Medicine, Volume 5, Issue 1, January 2015.
19) Kumar RJ, Kavya S, Fathima N, Charishma S, Rao T. Laxmi V, Sri S. Preparation and evaluation of polyherbal hair oil: World Journal of Pharmaceutical Research. 2024; 13(5): 283-293.
20) Sunil Pareek, Narashans Alok Sagar, Sunil Sharma, Vinay Kumar, Onion (Allium cepa L.) Sept 2017.