



A COMPLETE REVIEW ON PHYTOCHEMICAL OBTAINED FROM CURRY LEAVES AND OTHER HERBAL INGREDIENTS FOR HAIR AND SCALP PROBLEMS

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Abstract:

Human hair growth is very important to our health and well-being. Curry leaves and other herbal ingredients are known for their potential as hair growth stimulants and conditioners. These products address hair-related issues like hair loss, thinning, split ends, dandruff, increased sebum production, and hair loss. Hair conditioners boost bounce, nourish hair, maintain scalp cleanliness, and add shine. Curry leaves, also known as *Murraya koenigii*, are used in India for their anti-dandruff properties. Amla, a rich source of vitamin-C, amino acids, and minerals, is also beneficial for hair health. Flaxseed, rich in α linolenic acid, lignans, and fibre, improves circulation and promotes hair growth. Shikakai is an effective Ayurveda medicine for hair-related issues, helps clean the scalp without irritation. Hair loss can be caused by stress, illness, fungal infections, ageing, low thyroid, chemical agents, and hormonal imbalances. Maintain hair health, apply oil to the head, rub the scalp with fingertips, style damp or dry hair, consume a variety of fruits and vegetables, apply honey, wash hair with fuller's earth daily, and prevent dandruff with castor, mustard, and coconut oil.

Keywords: Hair, Herbal constituents, hair growth stimulants, Herbal conditioner, Nutrition

INTRODUCTION:

1.1 General

Scalp is an important part in human hair system. It is made up of layers of soft tissue that cover the skull and the region of the head where hair grows. Many hair-related issues are being experienced by people nowadays, including hair thinning, split ends, dandruff, increased sebum production, and hair loss. Herbal preparations are known for its "no side effects" property.

Utilization of herbal components is extending progressively. ^[1]

Hair cosmetic agents are preparations intended for placing in contact with the hair and scalp, with the purpose of cleansing, promoting attractiveness, altering appearance, and protecting them to maintain them in good condition. ^[2]

1.2 Types of hair:

1. Dry hair
2. Oily hair
3. Balanced hair

Each hair type needs a different type of care. 50 to 100 hairs fall out on average each day. On your head, these hairs are replaced and grow back in the same follicle. However, hair loss requires treatment if you are losing more than that. Stress, persistent illness, fungal infections, aging, low thyroid, various chemical agents, specific types of medicines, and hormonal imbalance are just a few of the factors that contribute to hair loss issues.^[7]

1.3 Hair growth cycle:

Hair growth is cyclic, with phases of growth (anagen), involution (catagen), and rest (telogen) (Fig. 1). 1-3 The cycles of active growth and rest are regulated by complex messages between the epithelium and the dermis that are not yet well understood. In a normal scalp, most follicles are growing (90 to 95 percent), a few are undergoing involution (less than 1 percent), and the remainder are resting (5 to 10 percent). 4-6 At the end of telogen, hair is released and shed and the next cycle is initiated. Each day, up to 100 hairs in telogen are shed from the head and about the same number of follicles enter anagen. The duration of anagen determines the length of hair, and the volume of the hair bulb determines the diameter.^[21]

We are born with all our terminal hair follicles — approximately 100,000 on the scalp — that are predetermined to grow long, thick hair. Other follicles are predetermined to grow vellus hair, which is short, fine, and relatively nonpigmented and covers much of the body. Follicles can become larger or smaller under systemic and local influences that alter the duration of anagen and the volume of the hair matrix.^[21]

These are various hair problems such as:^[1]

1. Hair loss.
2. Hair thinning
3. Excessive dandruff
4. Split ends
5. Dryness and roughness of hair
6. Bald patches

1.4 Hair care:

After applying oil to the head for 15-20 minutes, letting it sit for 2-3 hours (or overnight), and then rinsing with shampoo. This promotes the renewal of the pores in your hair.

- Don't condition your scalp or hair roots, only your hair. Rub the scalp with your fingertips after washing your hair until both your fingers and the scalp are warm. The sebaceous glands are stimulated to produce oil for hair growth, and the blood circulation is also enhanced.
- When your hair is damp or dry, style it. Try to prevent tease because it can harm your hair.

Feel at ease and stress-free in your life.

Make it a practise to consume a variety of fruits and vegetables to ensure you are getting the vitamins and minerals your hair needs.

Use two or three glasses of water and a few crushed hibiscus (shoe flower) leaves and blossom to wash your hair.

Combine honey and egg yolk on a dish. Apply this treatment to the hair and scalp, then wait 30 minutes before washing.

Apply honey to your scalp to get rid of frizzy, tangled hair. A fantastic natural hair product for dry hair may be made by combining honey with two cups of fresh cream.

Washing your hair with fuller's earth (Multani Miti) daily will help to reduce the creation of excess oil.

To prevent dandruff, apply and massage a mixture of castor, mustard, and coconut oil.^[7]

2. Benefits of hair-pack:

- 1) **Gives bounce to hair:** Conditioning your hair after shampooing leaves a greasy layer of conditioner on it. This may make your hair appear thin, especially if you have fine hair. Shampooing after conditioning helps get rid of this issue.
- 2) **Nourishes the hair:** Many conditioners help increase the keratin protein in the hair, adding softness and smoothness to it. Conditioning your hair before shampooing helps you gain the maximum benefit of this.
- 3) **Maintains scalp cleanliness for longer:** Shampooing after conditioning cleanses the scalp without drying the hair and helps the scalp stay clean for longer.
- 4) **Adds shine to hair:** Most hair conditioners contain ingredients that add life and luster to the hair. Shampooing your hair after using such conditioners will add shine to the hair without weighing your hair down.
- 5) **Reduces scalp oiliness:** Conditioning before shampooing is also good for people who tend to have oily scalp or hair as it softens the hair without leaving it extra greasy.^[5]

3. PLANTS USED IN HAIR GROWTH PROMOTION:

3.1 CURRY LEAVES (*Murraya koenigii*):

Most of the population relies upon herbal medicines because they have been considered as safe, effective, and economical. *Murraya koenigii* (Curry Leaves /Kadhi Patta /Mitha Nimba /Giri Nimba) is one such medicinally important herb which is widely used as spice, condiments and used to treat various diseases in India. Curry leaves contain many important ingredients like carbohydrates, proteins, fibres, calcium, phosphorus, iron, magnesium, copper, minerals and vitamins like nicotinic acid, vitamin A, B, C and E, antioxidants, plant sterols, glycosides, and flavonoids. Green leaves are eaten raw for cure of dysentery, diarrhoea and for checking vomiting.^[4]

Uses: Anti-Dandruff: Curry leaves when used regularly remove dead hair follicles, which is one of the reasons behind dandruff.

- Prevent Premature Greying
- Stimulates Hair Growth
- Rejuvenation of Hair Follicles
- Strengthening of Hair Shafts
- Prevents Hair Thinning
- It also helps remove the dead hair follicles, which can be the reason behind dandruff^[4]

Curry leaves Extraction:

Collect the curry leaves.

↓ Wash it under running water.

↓ Blanched in boiling water.

↓ Dipped in chilled water immediately after blanched.

↓ Pour it in Petri dish Keep it in lyophilizer.

↓ At – 65°C, 75hr. Take it out and grind it.

↓ Powder sieved through mesh No. 30

↓ Powder is formed^[4]

3.2 AMLA (*Phyllanthus ambluca*):

Amla is highly nutritious and is one of the richest sources of vitamin-C, amino acids, and minerals. It contains several chemical constituents like tannins, alkaloids, and phenols. Amla is also reported to

possess chemo preventive, radio, immunomodulatory, antioxidant, free anti-inflammatory, chemo radical and scavenging, anti-mutagenic activities.^[1]

Uses:

- Amla benefits include antibacterial & astringent properties which help improve the body's immunity system.
- Amla purifies the blood and enhances hair natural colour by preventing premature greying of hair.
- It contains calcium, which promotes healthier hair.
- It stimulates hair growth and improves the quality of hair.
- It can treat hair loss effectively.
- It has antifungal and antiviral properties, which prevent dandruff and other fungal infections and improve scalp health.
- Improve brain health and function.
- Improve vision and eye health.^[4]

Amla Extraction:

Amla Fruit

↓ Blanching

↓ Juice extraction by grinding in mixture.

↓ Filtration through mucline cloth

↓ Amla juice^[4]

3.3 FLAXSEED (*Linum Usitatissimum*):

Flaxseed is emerging as an important functional food ingredient because of its rich contents of α linolenic acid, lignans, and Fiber. flaxseed is full of fatty-acids and antioxidants which help to remove toxins and dead cells from the scalp.

Flaxseeds are rich in vitamin E, which is great for both skin and hair health. It helps improve circulation in the head, thus promoting hair growth and slowing down hair breakage. It may also help prevent premature greying of hair.^[4]

Uses:

- Flaxseed oil, fibers and flax lignans have potential health benefits such as in reduction of cardiovascular disease, atherosclerosis, diabetes, cancer, arthritis, and osteoporosis, autoimmune and neurological disorders.
- Flaxseed is full of fatty-acids and antioxidants which help to remove toxins and dead cells from the scalp.
- Flaxseeds are rich in vitamin E, which is great for both skin and hair health.
- It helps improve circulation in the head, thus promoting hair growth and slowing down hair breakage.
- It may also help prevent premature graying of hair.

Flaxseed Extraction:

Flaxseed

↓ Soaked in water.

↓ (24 hr)

Boiled the solution of Flaxseed & water.

↓ Sticky transparent mucilage collected^[4]

3.4 Shikakai (*Acacia concinna*):

Shikakai has a special capacity to wash the scalp without irritating it, making it effective as an

anti-dandruff remedy. It is very beneficial for treating persistent dandruff caused by an excess of scalp oil. It benefits by taking away excess oil from the scalp. Decrease dandruff when used regularly. One of the most effective Ayurveda medicines for hair-related issues, including hair fall, is Shikakai. Shikakai aids in cleaning the scalp of debris and surplus oil and encourages hair development.^[6]

Uses:

- Shikakai may naturally soften and smoothen hair by releasing essential oils and vitamins that are important for hair growth.
- It may encourage hair development and may help maintain hair silky and lustrous. When used for hair, shikakai may help with the restoration of hair's glossy texture, thickness and length.
- Shikakai is high in important nutrients, thus it may keep hair healthy and prevent breakage and brittleness, which are two of the most prevalent causes of hair loss.
- Shikakai may potentially be used as a common ingredient in hair masks. These cooling packs, which are usually made up of Shikakai, amla, yogurt, and soap nuts, can possibly provide welcome relief during hot weather, a nagging headache, or simply for a peaceful experience on a leisurely day.

Shikakai Extraction:

Shikakai powder

↓ Soaked in water.

↓ Boiled the solution of shikakai & water.

↓ Dry and collect the solid extract

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