

# Latest Herbal Treatments for Hair Fall



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### INTRODUCTION

As per the National Center for Complementary and Integrative Health (NCCIH), a branch of the National Institutes of Health (NIH, USA), about 30% of adults and 12% of children choose treatments developed “outside of mainstream Western, or conventional medicine,” spending almost USD 30.2 billion annually.[1] In modern humans, hair doesn't serve any crucial physiological function. Despite this, it plays an important role in our self-esteem. Hair loss (alopecia) does not have many physically harmful effects, but it may have psychological consequences, including high levels of anxiety and depression. Hair is a fibrous structure made from several proteins, the principal one being keratin. These hairs grow from tubular funnel-like structures referred to as the hair follicles. The formation of the hair shaft begins with one somatic cell group called the matrix of the hair bulb and differing types of keratinocytes.

The hair is made by the relatively rapid division of proliferative cells within the follicle. The newly formed cells are differentiated, keratinised, and pigmented in a follicle to make a dead hair shaft. Hair contains keratin (with a high content of the aminoalkanoic acid cysteine), water, lipids, minerals, and the pigment melanin. [2]

Multiple factors contribute to hair loss, including genetics, hormones, environmental exposure, medications, and nutrition. Vitamins and trace minerals play an important role in the follicle cycle and maintain homeostasis as enzyme cofactors, hormones, antioxidants, and immunomodulators. Botanical products regulate inflammation, minimize oxidative stress, and control hormone levels. Mind and body practices, including acupuncture and massage can also help to reduce physiologic and emotional stress that causes hair loss. [3]

Several home remedies are used to regrow hair. However, it's important to understand that such methods are not supported by research. There are many common myths about lifestyle approaches or remedies which will help hair regrow, and it's often difficult to differentiate between fact and fiction.[4]

## Lifestyle techniques and methods

**1. Hair Care:** There are some misconceptions about hair care methods that result in hair loss and regrowth. Hair dye is a cause of temporary hair loss as most hair-coloring treatments contain chemicals that damage the hair. Hair care products like gel, mousse, or hairspray, usually do not cause hair loss but vigorous brushing and some hairstyles like tight plaits, ponytails, or cornrows can cause hair loss.

**2. Nutrition:** Lack of nutrients will affect hair loss although the exact links between diet and hair loss are unclear:

- **Iron:** Iron deficiency, the most common nutritional deficiency in the world can cause hair loss. Women experiencing perimenopause and menopause, vegans, vegetarians, and people with some diseases like celiac disease are at risk of iron deficiency. It has been observed that the reversal of iron deficiency can aid in restoration of hair growth.
- **Zinc:** Zinc deficiency has a direct link with brittle hair, and increasing zinc levels also leads to the regrowth of hair. But it is not clear if zinc supplementation would help those without an established zinc deficiency.
- **Fatty acids:** Essential fatty acid deficiency can lead to hair loss on the scalp and eyebrows.

It is however important to remember that there is a lack of evidence on the role of supplementation to prevent hair loss in people that do not have nutrient deficiencies.

**3. Stress:** Stress as well as physical or emotional trauma can affect the growth of hair follicles and cause hair loss.

## Disorders of Hair:

The various disorders of hair causing hair loss are listed in Table 1. The most common one being androgenetic alopecia, which refers to the patterned loss of scalp hair in genetically susceptible men and women. It is also known as male pattern hair loss or common baldness in men and as female pattern hair loss in women. Alopecia in these cases is characterized by thinning of hair as opposed to follicular loss, at least in early stages [5].

Table 1. Common disorders of Hair

Disease	Etiology	Clinical Features	Treatment
Anagen effluvium	Secondary to cytotoxic drugs like thallium, bismuth, arsenic; cell division inhibition in hair follicle.	Loss of all hair on scalp	Scalp cooling
Telogen effluvium	Shedding of telogen hairs, secondary to stress like high fever, surgery, crash diet	Uniform decrease in density all over scalp, Positive hair pull test	Shampoo less frequently. Can get up to years to grow back
Alopecia Areata	Genetic Factor, Autoimmune disease	Circular patches of hair loss, Hairs grow back white.	Inject steroid (kenalog)
Androgenic Alopecia	Male and female pattern baldness	Beginning with bitemporal recession, bald patch	Rogaine (Minoxidil) Propecia (Finasteride) Transplants.
Trichotillomania	pulling hair out	Chronic, repetitive hairpulling	Self-monitoring, Stimulus control, Habit-reversal training

## **Latest Treatments for Hair Loss**

**1. Onion Juice:** The sulfur in onion juice is believed to help hair regrowth. There's not much research on this, but in a small study conducted in people with alopecia areata, which causes patchy hair loss, half put onion juice on their scalp twice a day while the rest used tap water. It was found that 74% of the onion juice group had regrown some hair, as compared with 13% of the control group after 2 weeks.

**2. Iron:** Iron is a crucial nutrient and low levels of it are linked to hair loss, although the exact reason is not known. Plenty of iron-rich foods like meat, fish, poultry, tofu, broccoli, and all kinds of greens can help in reducing hair loss. However, it is advised to take doctor's opinion before taking iron pills, as high doses can cause vomiting and constipation and even be fatal.

**3. Biotin:** Biotin (vitamin B7) has been prescribed for hair loss and good skin. Foods like eggs, wheat germ, and mushrooms all contain a high amount of biotin. Many hair products contain biotin although scientific research to prove that it will help in hair loss is limited.

**4. Zinc:** Zinc helps with most processes in your body, strengthens the follicles under the scalp and nourishes the hair. Zinc needs to be supplemented through diet every day and if the zinc levels are low, oral supplementation of zinc could help with hair loss, but more research is needed.

**5. Saw Palmetto:** This herbal remedy is obtained from the fruit of a small palm tree and is hyped as a hair growth wonder drug. Some studies have shown that it keeps the male hormone testosterone from breaking down, which can in turn prevent hair loss. While it's unclear how well saw palmetto works, the safety of the same has been established and can be taken with other drugs too.

**6. Aromatherapy:** Sandalwood, lavender, rosemary, and thyme oils have been used to treat hair loss for over 100 years. Traditionally, rubbing one or more of these oils into the scalp for at least 2 minutes every night can help in relaxing and reducing hair loss.

**7. Silicon:** High levels of silicon element can slow down hair loss and make the hair look brighter. Different types of silicon supplements are available, but orthosilicic acid is found to be absorbed best by the body. However, it's not clear how safe silicon supplements are.

**8. Selenium:** Selenium can help the body fight off the toxins and keep the hair follicles healthy. But too much selenium can actually lead to hair loss and problems with memory.

**9. Melatonin:** Melatonin is known as the "sleep hormone" and is taken as a supplement for a good night's rest or to cut jet lag. Recently, melatonin has been found to boost hair growth or slow down hair loss.

**10. Green Tea:** A compound called EGCG in green tea extract may help a range of health issues, including hair loss. Researchers saw a difference when they gave balding rats green tea extract for 6 months, but the same hasn't been tested in humans. Further, green tea supplements should be taken with caution.

**11. Platelet-Rich Plasma (PRP):** Doctors sometimes inject PRP to help with healing after surgery. PRP, which is rich in growth factors, is injected into different points on the scalp and has been found to aid in thicker hair growth than before.

**12. Smart Hair Care:** In some cases, hair loss can be managed with small and easy changes. Being gentle while washing, drying, and brushing hair and limiting the use of curling irons, hot rollers, and tight hair styles can help reduce hair loss. In addition, smoking is also likely to cause hair loss.

**13. Tame Your Stress:** Going through a rough time can sometimes lead to hair loss. Techniques like meditation, deep breathing, guided imagery, relaxation exercises, or talking to a counselor are all proven to help ease tension.

## CONCLUSION

Hair loss (alopecia) does not have many physically harmful effects, but it may have psychological consequences, including high levels of anxiety and depression. Hair loss could be due to the use of chemical based hair care products, lack of nutrients and stress. In future studies, it would be beneficial to determine the duration of treatment, or, how long it takes to heal the follicles and to stop the process of hair loss. Disease of hair like Anagen effluvium, Telogen effluvium, Alopecia Areata, Trichotillomania etc. will affect the health of hair. For healthy hair, we need to have proper diet, sleep, and a stress-free lifestyle.

## References

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