

News from Sabinsa on Hair Care

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Long, thick and lustrous hair is an essential component to enhance an individual's beauty quotient. However, having healthy and beautiful hairs requires good care towards it as hairs are subjected to a lot of pollution and stress making it vulnerable to many a problem like hair fall, thinning of hair, damaged hair and premature graying.

Hair is considered a reflection of internal health as well. Beauty is redefined when hair is taken proper care of. Providing optimum nutrition, growth stimulants and regular cleaning may lead to healthy and beautiful hair. Hair care cosmetics are thus no longer formulations that enhance superficial beauty, but have a holistic approach to nourish the hair from within and render protection.

Pollution, stress and smoke have become day to day problems that the century faces today. These basic factors prove detrimental and harmful to the hair and skin. It becomes necessary to protect hair and skin from these hazards and simultaneously repair the damage caused.

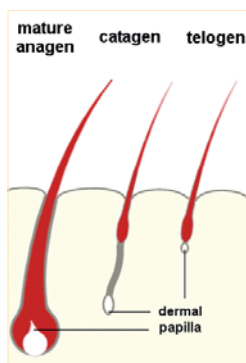
Understanding the anatomy and physiology of hair and hair growth is vital to provide care for one's hair. Hair may be defined as an outgrowth of filamentous cells, containing keratin, that grows from follicles found in the dermis. Beneath the skin are the living parts of hair (hair follicle, hair root, root sheath, and sebaceous gland), while emerging above the skin is the actual hair shaft. Scalp skin, must be kept healthy to ensure a healthy hair production.

There are three distinct phases in the growth cycle of hair:

- Anagen (the growing phase): With majority of hair follicles will be in this phase, it is in this phase that the hair grows in length.
- Catagen (the intermediate phase): In this phase the hair detaches from the blood supply. The detached follicle will slowly shrink to about 1/6 of its size and the bulb will be pushed upwards towards the surface when the new hair is formed.
- Telogen (the shedding phase): In this final phase, hair doesn't grow but stays attached while the dermal papilla is resting.

With the end of one cycle, after telogen the follicle re-enters anagen and the dermal papilla reattaches to the base of the follicle to start a fresh cycle. If the old hair has not already epilated, the new growing hair will push it out.

What determines the length of the hair is the specific characteristics during each phase of hair growth. While at any point of time all three phases occur simultaneously; one strand of hair may be in the anagen phase, while another is in the telogen phase.



One has to deal with common hair challenges like dandruff, oily hair, dullness, dryness, sun damage, genetics, malnutrition, traumatic stress, auto-immune disorders in today's world – all of which finally lead to hair loss. Thus hair care in the natural way eliminates the chances of damage to hair by harmful chemicals. Hair strength, vitality, shine and texture indicate healthy hair.

Natural ingredients protect, nourish and strengthen hair for maximum beauty, health and shine. They effectively help in conditioning, cleansing and styling of hair.

Cococin™ CG

Cococin™ CG is obtained from coconut (*Cocos nucifera*) and is standardized to contain at least 30% total carbohydrates and free amino acids. It is used in hair care formulations and in rejuvenative topical preparations. Also available is Cococin™, the freeze-dried tender coconut water available in a free flowing powder form.



Cococin™ is rich in proteins, amino acids, sugars, vitamins, minerals and growth hormones essential to promote tissue and hair growth.

Coconut water the liquid endosperm of green coconuts (*Cocos nucifera*) is a refreshing beverage, a natural rehydration medium and is used as a supplement in nutrient media for plant tissue culture.



Salient Features of Cococin™ CG

- From tender coconut water
- Compatible solubility for hair care formulations
- GRAS Affirmed
- Packed with high potency nutrients

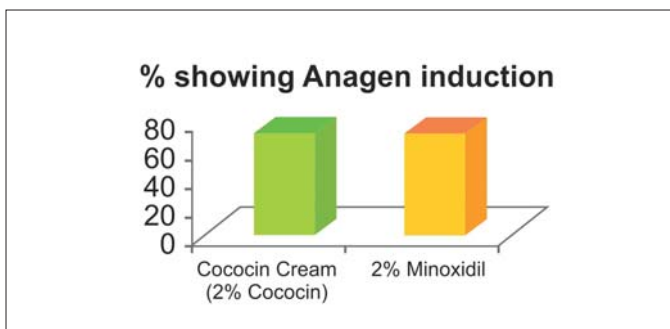
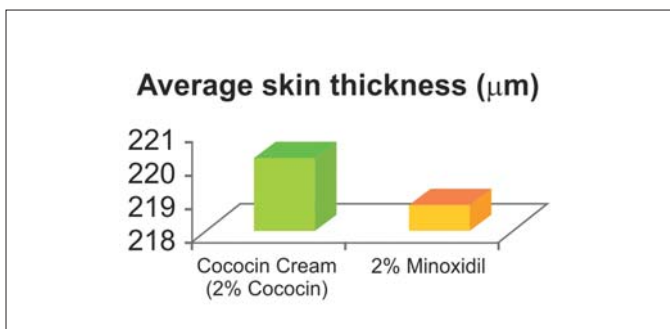
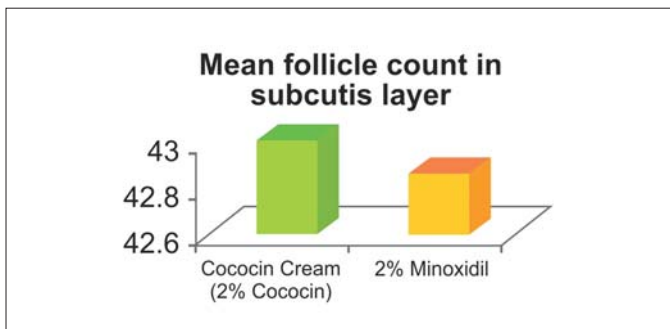


Hair growth promoters are known to potentiate the transition of Telogen to Anagen phase which is manifested by increase in follicle count in subcutis, increase in skin thickness and graying of the pink skin.

Cococin™, a **natural cell-growth promoter** has been evaluated for its efficacy as a hair growth promoter, in comparison with Minoxidil as standard. In the study, hair follicles were seen to be transformed from Telogen to Anagen phase of hair growth showing a response to the topical application of formulations containing Cococin™. It has been proved to be safe for topical use with zero skin irritation potential.

* Sabinsa Corporation

Treatment	Mean follicle count in subcutis layer	Average skin thickness (µm)	% showing Anagen induction
Cococin™ Cream (2% Cococin)	43.00 ± 12.20	220.15 ± 25.60	71.4
2% Minoxidil	42.86 ± 13.49	218.75 ± 34.04	71.4
5% Dextrose	3.43 ± 3.27	156.27 ± 5.14	14.2



Cococin™ was found to be safe for topical use
Primary Skin Irritation: Did not cause irritation

Barley Beta Glucans

Barley Beta Glucans is a white to off-white powder extracted from Barley (*Hordeum vulgare*) seeds having not less than 25% Beta-glucans. Beta-glucans are **non-starch polysaccharides** composed of glucose molecules in long linear glucose polymers with mixed β-(1→4) and β-(1→3) links with an approximate distribution of 70% and 30% respectively.

It has been clinically substantiated for an improvement in tensile strength of the hair (David Peters, 2012). The study has been carried out on individuals using a leave-on conditioning serum containing beta-glucans. An **improvement in tensile strength of the hair** on day 5 when compared to that of the baseline was observed.

1, 2 Octanediol

1, 2-Octanediol is a clear colorless liquid above 40°C acts as a potential pediculicide.

In a multicentre, parallel, randomized, observer blind study of 520 participants,

1, 2 Octanediol lotion was significantly more effective when compared with 0.5% malathion liquid.

Treatment	Malathion	1,2 Octanediol (2 Hours)	1,2 Octanediol (8 Hours)
Total participants	171	175	174
Successful treatment	81	124	153
Treatment success rate	47.4%	70.9%	87.9%
Relative success (RR)	-	1.50	1.86

Burgess et al (2012) PLoS One; 7(4): e35419

1, 2 Octanediol lotion acts by the novel mode of action to disrupt cuticular lipid on both head lice and their eggs and offers a cure rate of 80% when applied for eight hours / overnight. Thus 1, 2 Octanediol was effective and well tolerated pediculicide. Being alcohol free is more acceptable exhibiting significantly fewer adverse reactions.

Rosemary SCFE

Rosemary oil is ideal for both the scalp and hair. It helps to stimulate and improve blood circulation to hair follicles.

The improved blood flow increases the supply of nutrients to the scalp, thereby nourishing the hair follicles which in turn imparts shine and also strengthens the hair.

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