

## Review on New Medicine of Beauty

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**ABSTRACT:** Cosmetic products are used to maintain better skin conditions. Importantly, these skin care products should satisfy specific requirements for particular life phases and particular skin conditions. Two different age groups are focused in this review—namely, infants and the elderly—also on two different skin conditions occurring in both age groups—very dry skin (Xerosis) and hyperhydrated skin (diaper rash). The main objective in both diseased conditions is to maintain skin physiological condition in an acidic state, which is very important for maintaining the permeability of the barrier and its function, stratum corneum integrity/cohesion and antimicrobial protective defences. Formulation of skin care products is effective with the use of a buffer system of more acidic pH; for example, this may be an option to enhance the acid mantle and skin barrier function, which directly keeps the skin in a “better condition.”

**KEYWORDS:** Xerosis, Hyperhydrated skin

### I. INTRODUCTION

The word Cosmetic is derived from the Greek word which means to 'adorn' (addition of something decorative to a person or a thing). These additives are substances used which come in contact with various body parts of the human like skin, hair, nail,

lips, teeth, and mucous membranes etc. Cosmetic substances help in developing or changing the outward appearance of the body and also act as antiperspirant for the body. It maintains good condition of the skin. In general, cosmetics are external formulations which are meant to be applied on the external body parts. Even in earlier days, men and women used to decorate their bodies for improvement of appearance and elegance to the body. Men used leaves of vegetables and parts of animals whereas women used to wear colored stones and flowers round their neck and wrist. Gradually, they began to use colored earth and ointments on their face and body. Baked earth materials became very common among the people which were used as bangles and necklaces. Eye shadows were made of copper (coloured earth) ore and lamp black (coloured earth) while red colour was used for dyeing of hair and changing hair colour. In the modern era, cosmetics have become a very important component of life. They are used to give good physiological and good appearance to the body. It has gained favour from the last 3-4 decades and its use has been growing exponentially both in females and males. Hair dyes, powders and creams are the most popular cosmetics used. Cosmetics also have moderate pharmacological activity and are called quasi drugs.



Cosmetics contain mixtures of phytochemical compounds derived from either

natural sources, or synthetic compounds which are created by laboratory reaction. Cosmetics have

various purposes and day to day life . Those cosmetic product are designed for personal care and skin care, hygiene care which show cleansing and protective action to the body or skin. Cosmetics designed to intensify or switch one's appearance (makeup) can be used to conceal deformity or discoloration , enhance one's natural qualities (such as the eyebrows and eyelashes), add color to a person's face, or alter the appearance of the face completely to resemble a different person, creature or object. Cosmetics product can also be designed to add fragrance and odour to the body.

The importance of beautification to the mankind has been known since the prehistoric time and the desire to look beautiful and healthy has been developing in society. In recent times fitness, good health, looks, way of presenting oneself are being counted as one of qualities of personality, nowadays people are also been judge on this factors. Hence today their is necessity and desirable requirement to give more attention to the looks and beautification for social acceptance as well as professional success, which is also overemphasized by the media. A subset of cosmetics is called 'make-up' which refers mainly to coloured products intended to change the user's appearance.

#### USE OF HARMONES IN COSMETICS

Hormones derived from placental extracts, probably with elevated concentrations of progesterone and estrogenic contents, are sometimes incorporated in cosmetics and hair care products, particularly products marketed. This advertised product promote growth and provide thickness to the hair and increase hair volume.

Hormones, especially estrogens, are also added to anti-aging creams products because of their effectiveness in increasing amount of collagen count and promotes the hydration to skin. Together, these two hormonal factors are used to reduce wrinkling of the skin as well as they can also increase estrogen exposure to womens body through out lifetime and these Increased amount of exposure to estrogen can

be causative factor to the development of breast cancer in future life by developing rapid cell multiplication of mammary tumor cells when they are colonized in the body .In this review of experimental information on the use of sex steroids content in cosmetics, there is evidence of using some topical application of steroidal hormones which can be both active and inactive biological agents, they can cause minute histological thickening of the epidermis layer of matured skin. There are negligible changes that can occur which can be questionable and have clinical effect. A safe amount of content has to be incorporated in cosmetic preparation where topically applied estrogen has minute kind of effect on the sebaceous gland and amount of sebum. Physiologically produced natural amount of progesterone cause no increasing effect of oil secretion in the human. Adequate safety parameters are shown by hormonal formulation which is applied topically. There is good reason to choose hormone-like substances in formulation for years. They are predicted to have negative effects on the body and can cause disease. As studies revealed repeatedly that many cosmetic products still contain these chemical constituents.

There are many such contents in shampoos deodorants and lipsticks. These substances inside the body behave like hormones that are endocrine active substance. In animal experimentation, it was observed that these chemicals may cause symptom likebehavioral abnormalities, infertility or even cancer which may lead to death. These substances can impart effect on the body in different ways. Sometimes they can bind in different areas of body which are particularly reserved for the body's hormones. This make them act in the simillar way as endogenous substances. They can also form a blockage to the hormone binding sites in the body receotors and can also interfere with hormone degradation, production or transportation processes. Generally, not every hormonal active substance posses harmful effects .



Figure source :google

### GROWTH FACTORS USE IN COSMETICS

Growth factors are the proteins that control cellular growth, proliferation and differentiation, maturation under favourable conditions. They play an important role in controlling healthy skin structure and functions.

Growth factors secretion by all cell types in the epidermis and dermis includes keratinocytes, fibroblasts and melanocytes. Growth hormones are not growth factors. They are natural substances produced by the skin cells that support the repairing of damaged skin and prevent ageing also by environmental factors. They also enhance the production of collagen and elastin to provide firmness and elasticity to skin. Cells in ageing skin make few growth factors than cells in skin of youth. One approach to build the levels of skin rejuvenation is to regularly use in skin care products with a elevated concentration of stable growth factors. Day to day use of skin care products composed growth factors is well known to decrease the appearance of fine lines, wrinkles and improve skin tone, texture and also prevent blackheads. These are natural substances produced by the skin cells that support the remake of damaged skin cell, as a result of ageing or environmental factors. They promote the formation of collagen and elastin to provide strength and elastic to the skin. High concentration of stable growth factors support the level of skin to make

them healthy and rejuvenate. It has been declared that growth factors having large molecular size that prevents themselves from getting inside the epidermis. However, some of the clinical studies from the last 15 years have proven the advantages of topically applied growth factor formulated product shown refinement in the appearance of fine lines, wrinkles, discoloration, and texture. Addition of growth factors with antioxidants (like, vitamin C) and peptides (for example, cytokines) show rapid results, typically within duration of 4–8 weeks. It has been predicted that application of growth factors to the skin in high concentrations, a small amount perforate the superficial epidermis and this initiates the communication chain that stimulates the dermal fibroblasts to produce collagen.

#### Intrinsic ageing

It is a planned capacity of cells to stop its proliferation or division. The amount of collagen reduce in the skin is about 1% in time period of 1 year. The decomposition of collagen increases which is responsible for thinning of dermis by 20% in older people.

Extrinsic ageing : In this external factors are causative agent for the signs of ageing, particularly a ultraviolet radiation due to sun light and also harmed due to tobacco smoke.

Growth factors	Function
Transforming growth factor beta (TGF-B)	Stimulate collagen secretion

Vascular endothelial Growth factor (VEGF)	Stimulate new blood vessel formation
Hepatocytes growth Factor (HGF)	Stimulate new blood Vessel formation
Keratinocytes Growth factor (KGF)	Stimulate epithelial cell growth
Interleukins (IN-6,IL-7,IL-8)	Reduce inflammation
Basic fibroblast growth factor (bfGf)	Promote the creation of blood vessel
Insulin –like growth factor 1 (IGF1)	Promote cell growth And multiplies
Platelet –derived growth factor AA (PDGF-AA)	Regulate cell growth And division
Transforming growth factor (TGF-B2 and B3)	Stimulate collagen secretion
Granulocyte - monocyte colony stimulating factor	Increase number of white blood cells

### VITAMINS USE IN COSMETICS

A balanced diet that provide a range of essential minerals and vitamins are very important for regulating your hair and skin condition. “The 90% of absorption is shown by active ingredients in vitamin when it is applied to skin ".There's different kind of vitamin-enriched skincare products that is beneficial for day to day routine.

1. VitaminA is also known as a retinoid and its function to repair cells. A vitamin A has ability to improve overall skin structure ,elasticity,and its balance. Vitamin A rapids collagen secretion and produces elastin by stimulating fibroblast.

“Vitamin A enhance skin health by reducing appearing symptom of ageing like opened pores,texture and hyperpigmented spots. It has self-repairing function, it is used for treats acne spots.

#### 2. Vitamin B3

Vitamin B3 (or niacin) soluble in water and is used for different purposes in our body. It enables to enhance memory and reserving of calcium, improves the digestion and maintain anxiety . “Niacinamide is mainly incorporated in creams and serums as a good topical agent . It also have anti-ageing and anti-inflammatory activity which

helps soothing the skin condition. Vitamin B repairs the skin by providing the sufficient energy to the cells and also reduce post-acne marks on the skin.”

### 3. Vitamin B5

Pantothenic acid prevents dehydration and it holds moisture, which prevents symptom like dryness, flakiness, itchiness and also accumulation of dead skin cells as well as it prevents skin from redness caused by UV rays. It increases the secretion of glutathione, which is a powerful antioxidant that fights against free radicals in body that can damage skin as well.

### 4. Vitamin C

It has an all kind of effect. It is photo-protective agent and used to improve skin's barrier against sun damaging effect. It is a very powerful antioxidant, it help for fighting free radical damage and symptom of premature ageing like hyperpigmentation due to melanin and early ageing of skin. “L ascorbic acid is important content of vitamin C and its minimum percentage to be available must be 15% to 20% in formulation of skin care product like creams and serums, lotions and face washes.

### 5. Vitamin E

Vitamin E is act as antioxidant agent. It is fat-soluble vitamin and serves as a good moisturising and soothing effect as cream. Vitamin E contains alpha tocopherol as a main ingredient and provides photo-protective function to the skin by absorbing UV radiation. “It also allow the synthesis of elastic and collagen which directly help in for skin building and texturing. The main ingredient alpha-tocopherol show a antioxidant property when used in addition with Vitamin C also target free radicals in body. Its topical application is used to soothe burn wound and reduce inflammation, and disappears scars.”

### 6. Vitamin K

Vitamin K is an anti-inflammatory agent and its main physiology is to help to induce quick blood clotting and hence it helps to minimize bruises and swelling of skin. “These vitamin is used in a cream formulation which is used in post-surgery for healing of wound and decrease the swelling.”. Vitamin K also vanishes the dark circle and increase glowing effect.

## NEWER APPROACHES FOR COSMETICS

### Hydroxalclites for Controlled Delivery:

Its synthetic layered double hydroxide clays (LDHs) has attracted now a days because of their easily regulation in chemical composition in

the formulation, biocompatibility and reducing of toxicity. These materials comprise positively charged layers and charge-balancing exchangeable anions present in their interlayer regions. They are currently used as carriers of drugs, amino acids and antibiotics, and show better conclusion in terms of controlled release, drug loading and the protect the labile biomolecules of products. In cosmetics, these materials possess activity of changing rheology and also act as mattifying agents, multifunctional excipients also absorbents as well as texturizing agents. Antiperspirants are designed such that the more you sweat, more the activity is shown.

### Microbiomics for Cosmetics:

The advanced probiotics and prebiotics obtained from gut microbiota research and also give advantages to skin. “Microbiome has three main approach that is it can rebalance, protect and can trigger skin.” The rebalancing aspect related to providing prebiotics and probiotics to stabilize the microbiome's return to balance. Protecting it is exactly that keeping a healthy microbiome in balance by protecting the “good” bugs and in return decreasing the “bad” bugs. Microbiome triggering is related to the leveraging its influence on skin for desired essential benefits like providing a precursor for detannin that is inactive but on contact with the skin microbiome, is cleaved and initiates a several events to give desired end results and effect.

### Circular Economy:

The recent approach to sustainability for manufacturer is to recycle natural by-products and waste from food and agriculture to formulate active ingredients which can be used in cosmetic product. “Project of reusing the skin of blueberries from foods to protect from the blue light,” and also recycle natural by-products or waste from the foods industry is a good option for ingredient suppliers. There are many example of benefits afforded by citrus peels, which is rich in flavonoids; olive waste, which contain polyphenols; and tomato pulp and seed, which hold antioxidant activity and their fermented components can synthesize amino acid and prebiotics which can be used in cosmetic products.

### Botanicals:

A large variety of botanical products exists and many claims are made related to benefits of botanical product and their dermatologic effects; however, their are few studies have been conducted to substantiate the claims and evaluate the safety and efficacy of these ingredients. Among these botanical substances their are few example like Ginkgo biloba, silymarin, ginseng, soy, and green



tea have shown ability to enhance skin health and appearance. Ginkgo biloba is a common botanical added to moisturizers for its anti-inflammatory and antioxidant properties.

## II. CONCLUSION:

This article concludes that the cosmetics are the example of the discovery of the chemistry class generally used in our day to day life. If we just read the composition of cosmetic product gives the knowledge about the ingredients like water emulsifier pH stabilizers, preservatives, dyes, Perfumes, thickening agents, etc. Which are taken in the different ratio for the formulating of any of cosmetic product. Generally cosmetics are used to alter the appearance of the human.

This article highlighted view on the newer approach of cosmetics. Customer satisfaction is the important thing while the preparation or formulating cosmetics product. In future, the different inventions of the cosmetics product may be helpful for the every person to enhance appearance also for taking care for own.

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