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REVIEW ARTICLE

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# A Review on Ayurvedic Cosmetology and Cosmetic Toxicity

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### ABSTRACT

The skin is the fundamental component of one's exterior appearance. Both in the past and the present, external beauty has drawn a great deal of interest and desire. *Ayurveda* is highly sought after in the cosmetology profession because of its distinct outlook on beauty and its long-lasting, cost-effective, and efficacious beauty therapy. Person's overall health conditions determine their level of healthy skin, which necessitates a variety of skin care treatments throughout life. These treatments - *Panchakarma*, *Varnya Mahakashay*, *Achara Rasayan*, *Rasayan* therapy, *Sadvritta*, *Dincharya*, *Rutucharya*, and diet control - are advised by *Acharyas* and are detailed in the *Samhita*. *Ayurveda's* cosmetic approach in cosmetology is linked to mental and physical well-being. We purchase skin care products to take better care of our skin and to seem younger. However, due to the components in cosmetics, prolonged use of those items builds up within the body and can have negative effects like irritation, allergic hypersensitivity, and an increased risk of infection. It can also induce early skin aging by causing damage to skin tissues. *Ayurvedic* cosmetics, which is based on natural principles, meets modern standards. It is possible to successfully combine the concepts of *Gara Visha* and *Dushi Visha* with cosmetic toxicity. This article discusses the toxicity of beauty products and *Ayurvedic* notions related to cosmetology.

Key words: Skin, Gara Visha, Dushi Visha, Beauty, Toxicity

#### **INTRODUCTION**

The word cosmetic comes from the Greek word "kosmetike," which meaning "technique of dress and ornament." Beauty is something that everyone needs, and ladies are not the only ones who crave it. Since beauty not only draws attention from others but also fosters a sense of psychological comfort and self-assurance. [1] The Drugs and Cosmetics Act, 1940 (DCA)

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defines a cosmetic as any item that is meant to be cleaned, beautified, augmented with attractiveness, sprayed, poured, sprayed, or introduced into the human body or any part of it. It also includes any item meant to be used as a component of a cosmetic. [2] Every person aspires to be beautiful in order to please the senses. Beauty not only makes people happy, but it also, in part, generates pride and confidence. Cosmetics like Tilak, Kajal, Alita, and Agaru (Aguilaria agalbeha) were used as body ornaments and to produce beauty spots on the cheeks and chin in the days when gods and their deities ruled. Ancient texts such as Kalidasa's Abhijnana Shakuntalam and Meghadootam, along with many mythological epics, have references to these topics. The secret to using Ayurvedic cosmetics is found in the surrounding natural environment. Indians are adept at creating one-of-a-kind skin care products by combining precious stones, metals, minerals, fruits, vegetables, spices, and herbs.

Our bodies and skin experience both instant and long-term renewal when these treatments are combined with Ayurvedic massages and cleansing techniques. [3] Everyone aspires to appear more stunning, intelligent, and powerful. Cosmetics are products that are applied externally to improve someone's appearance and self-esteem. Though the goal isn't always accomplished because it depends on the product quality chosen, which is determined by the skin type - oily, dry, normal, or combination. Poor quality goods, lack experience, or insufficient competence prevent someone from achieving their goal. Dermatologists classify cosmetics under the following categories:

- 1. Skin Care Cosmetics Cleansing agent, moisturizer etc.
- 2. Hair Care Cosmetics Shampoo, Hair Colour etc.
- 3. Face Care Cosmetics Facial foundation, eye shadow, lipsticks etc.
- 4. Nail Care Cosmetics Nail paint, Paint remover.
- 5. Fragrance Product Deodorants, Perfumes etc.
- 6. UV light screening preparations.

Recent years have seen a rise in the demand for cosmetic items, which include lotions, shampoos, face powders, soaps, and creams. As a result, the cosmetic business has been producing large quantities of these goods without adhering to any set standards. Cosmetics may include harmful substances like lead, cadmium, and other substances that can cause cancer, birth defects, developmental disorders, and reproductive problems, among other illnesses.<sup>[4]</sup>

#### **A**IM

The Aim of the study is to understand the concepts of cosmetology in *Ayurveda* and the toxicity caused by the various cosmetics products.

#### **MATERIALS AND METHODS**

Reviewed from various *Ayurvedic* literature, websites, and relevant journals.

#### Cosmetology and Ayurveda

Numerous descriptions in *Ayurvedic* teachings emphasize the importance of cosmetology. The

emphasis has been placed on the "Physician," "Attendants," and "Patients'" attractive personalities and outward appearance. In Ayurveda, there are many terminologies that are employed, such as Sumukha, Sudarshana, Subhaga, etc.<sup>[5]</sup> and a relationship between them and the various Prakriti, Sara, Samhanana, Pramana, etc. types has been established. In addition, the representations of Ritucharya and Dinacharya obviously refer to the period's artistic sensibilities. An important factor that is taken into account for enhancing beauty is the explanation of meal plans and Pathya-Apathya. The most trustworthy indicators of the significance of cosmetology during that period are the distinctive Ayurvedic ideas, including Vyayama, Abhyanga (massage), various types of Snana, etc. Moreover, the concept of Rasayana therapy strongly suggests the importance of Yuvavastha, or the desire to look more appealing. Ayurveda places equal priority on health and beauty, despite the fact that beauty is praised regardless of age or gender in this philosophy. The only things that make someone beautiful are having a sound body and mind.<sup>[6]</sup>

As to Ayurveda, Bhrajaka Pitta is situated in the skin and contributes to the color and sheen known as Bhrajaka. According to Acharya Charaka, Pitta is responsible for both regular and aberrant skin colors. Skin pigmentation varies because Bhrajaka Pitta is found in the skin. In Ayurveda, the concept of beauty has a long history. Ayurveda offers a range of skin care therapies that are appropriate for all stages of life and holds that having excellent skin is a direct result of overall health. The ancient science of indigenous medicine is known as Ayurveda.

Ayurveda is in high demand in the field of cosmetology because of its original notion of beauty and its capacity to deliver long-lasting, cost-effective, and side-effect-free beauty therapy. It is not just a medical discipline; it is an art of living in human beings. According to Acharya Sushruta, an individual who possesses "Swastha Purusha" is one who has achieved harmony between the Doshas and the Agni, as well as specific and balanced functioning of the Dhatu and Malas. These indicate physical health, with a pleasant state of

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mind, soul, and senses serving as the mental aspect that constitutes health.<sup>[8]</sup> Both conditions result in a sound personality, which is the foundation of beauty. Three major categories can be used to classify the descriptions of healthy personalities and cosmetics found in *Ayurvedic* writings:

#### 1. Elements that determine beauty-

Prakriti, Sara, and Samhanana are often regarded as qualities that define beauty. Twak, broadly speaking, Varna, Prabha, and Chhaya. The organic beauty is determined by the Pramana of different Angavayavas. Texts describing Dirghayu Lakshanas supply the aesthetic sensibility and essential elements of uniqueness and beauty.

#### 2. Elements that lead to beauty-

Dosha and Dhatu contribute to the preservation of beauty when they function normally. Through digestion and metabolism, Agni in an equilibrium condition gives rise to Bala, Varna, Ojas, Dhi, Dhriti, Smriti, and other things. Similarly, Matrijadi Shad Bhavas and Panchamahabhautic combinations contribute to inherent beauty. A person's beauty is greatly influenced by their age, sex, race, religion, and anthropology.

#### 3. Elements that augment beauty-

The herbal Alternative methods include internal treatments like *Mahakashaya*, surgery like *Vaikritapaham* and Plastic Surgery, diets like *Matravat* and *Hitatam*, *Sadapathya Dravyas*, and medicines like *Rasayana*, *Ghrita*, and *Taila*. [6]

The Ayurvedic cosmetics may group under[9]

- Cosmetics to improve the skin's appearance on the face
- 2. Cosmetics for maintaining and growing hair
- 3. Cosmetics for skin care, particularly for teenagers
- 4. Shampoos, soaps, powders, fragrances, etc
- 5. Other products

Table 1: List of medicinal plants listed in Ayurveda for proven cosmeceutical.

Bandining District	Las Chin Tanina Auti Asias C		
Medicinal Plants used as Skin Tonics, Anti-Aging & Moisturizers.			
Aloe vera	Moisturizer, Sunscreen & Emollient		
Curcuma longa	Antiseptic, Antibacterial, Improves complexion		
Glycyrrhiza glabra	Skin whitening		
Ocimum sanctum	Anti-aging, Antibacterial & Antiseptic		
Triticum sativum	Antioxidant, Skin nourisher, anti- wrinkle		
Rosa damascena	Toning & Cooling		
Rosmarinus officinalis	Skin rejuvenator & Cleansing		
Rubia cordifolia	Wound healing & Anti-aging		
Daucus carota	Natural toner and skin rejuvenator		
Sun Tan			
Cyperus rotundus	Sun tanning		
Moringa oliefera	Sun tanning		
Astringent			
Mesua ferrea	Strong Astringent		
Pistacia Integerrim	Astringent, Rubefacient, Anti-bacterial		
Terminalia chebula	Astringent, Anti-bacterial, Antifungal & Antisep		
Ayurvedic Ingredients for Dental Care Product Uses			
Azadirachta indica	Toothache, Anti-bacterial, Dental carries		
Acacia arabica	Bleeding gums, Syphilitic infections & Swelling		
Barleria prionitis	Gum bleeding, toothache, and teeth strengthening		
Mimosops elengi	Astringent, keep gums healthy		

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Salvadora persica	Potent Antimicrobial			
Syzygium aromaticum	Local anesthetic, relieves toothache			
Symplocos racemosus	Strengthen gums and teeth			
Dermatological Applications				
Allium sativum	Antifungal, Antiseptic, Tonic			
Azadirachta indica	Potent Antibacterial			
Celastrus paniculata	Wounds healing, Eczema			
Nigella sativa	Antibacterial, Leucoderma			
Pongamia glabra	Herpes, Scabies, Leucoderma			
Psoralea corylifolia	Leucoderma, Leprosy, Psoriasis & Inflammation			
Ingredients for Hair C	are Product Uses			
Acacia concinna	Natural Detergent & Anti-dandruff			
Azadirachta indica	Reduces hair loss, Anti-dandruff			
Bacopa monnieri	Hair tonic, Promotes hair growth			
Eclipta alba	minimizes alopecia, or premature graying of the hair			
Emblica officinalis	Anti-dandruff, protecting & minimizing hair loss, toner			
Hibiscus rosa sinensis	Natural hair dye, anti-dandruff, and hair loss prevention			
Hedychium spicatum	Promotes hair growth			
Lawsonia alba	Natural Hair dye, Anti-dandruff, Conditioner			
Sapindus trifoliatus	Natural detergent & Cleanser			
Sesamum indicum	Blackens the hair, Promotes hair growth			
Rosmarinus officinalis	Softens, nourishes, and rebuilds the hair shafts			

Triticum sativum	Provides nourishment, lubrication & luster
Terminalia belerica	Prevents graying of hair
Aloe Vera	Cleanser & Revitalizer
Cedrus deodara	Anti-dandruff

#### **Cosmetic Toxicity**

Cosmetics are any materials intended to be rubbed, poured, sprinkled, sprayed, injected, or otherwise applied to the human body or any part of it in order to enhance attractiveness, clean, beautify, or alter appearance. Cosmetics come in a variety of forms that can be used for fragrance or perfumes, skin care, hair care, and makeup. Creams, lotions, cleansers, moisturizers, toners, and sunscreens are examples of skin care cosmetics. Shampoos, conditioners, hair gels, and hair sprays are examples of hair care cosmetics. Concealer, foundations, primers, eyeliners, lip sticks, lip liner, and other cosmetics are examples of makeup. Our biggest organ, the skin absorbs 60% of the things applied to it, which causes chaos in the body's systems.

These hazardous cosmetics loaded with chemicals work similarly to *Gara Yogas*, which many people inadvertently use these days. They cause both systemic and local illnesses when absorbed transdermally.<sup>[11]</sup>

We shall have a brief idea about the toxic effects of toxic principles present in Cosmetics from the following:

Table 2: Chronic toxicity of cosmetics[10]

Cosmetic name	Effect to the body	Name of toxic chemicals
Skin Care Cosmetics - Cleansing agent, Moisturizing agent.	High doses of these compounds cause liver tumors and precancerous alterations in the thyroid and skin. They can cause mild to moderate irritation of the skin and eyes.	Diethanolamine, or DEA, and its derivatives are used as a pH adjuster and to give creamy cosmetics. Monoethanolamide (MEA) and triethanolamine (TEA)

Hair Care Cosmetics- Shampoo, Hair Colouring agent etc.	The DEA's cocamide and lauramide cause allergic responses.  Cell DNA can be changed by p-phenylenediamine and the byproducts of its interactions with hydrogen. Skin tumors and neurological damage can be brought on by coal tar.	Shampoo contains DEA ingredients cocamide and laurimide. P-phenylenediamine is present in many permanent hair color formulas. Coal tar, also known as oxidative dyes, is a known skin irritant.
Face Care Cosmetics- Facial foundation, Powder, eye shadow, lipsticks etc	Aim for several physiological systems, such as the cardiovascular, gastrointestinal, neurological, hematologic, and renal systems.	Lead (Pb)
Nail Care Cosmetics- Nail paint, Paint remover	Acetone - a nail polish remover - causes headaches, vertigo, irritated eyes, skin irritations, and sore throats.  Acetonitrile: Symptoms include nausea, vomiting, irritated nose and throat, weakness, and tiredness.  Dibutyl Phthalate (DBP): Eye, skin, nose, mouth, throat irritation, nausea, and fainting at large doses.  Isopropyl acetate: drowsiness, eye, nose, and throat irritation.  Toluene: inflamed eyes, nose, throat, and lungs; headache, vertigo,	Formaldehyde and Formaldehyde-releasing preservatives (FRPs), such as glyoxal, sodium hydroxyl methyl glycinate, polyoxymethylene urea, diazolidinyl urea, and quaternium-15.

	numbness. During pregnancy, harm to the unborn child and damage to the liver and kidneys	
Fragrance Product- Deodorants, Perfumes etc	Certain irritants, particularly in children, can trigger allergies, excruciating headaches, and asthma. Phthalates and coumarin are suspected of disrupting	Phthalates, Phethleugenol, and Coumarin
	hormones, whereas phenol and coumarin are suspected of being carcinogens. Airborne contact dermatitis can be brought on by perfume spray.	
UV light screening preparations	Sunscreen ingredients may result in allergic, phototoxic, irritated, or photoallergic reactions. PABA, cinnamates, and debenzoylmethanes can all lead to photo-allergic dermatitis.  Ochronosis and mutagenicity are two side effects of hydroquinone. One side effect of HQ is onchrosis, which is characterized by a gradual darkening of the skin	DEA (diethanolamine) and its constituents, including benzophenones, debenzoylmethanes, cinnamates, and para-aminobenzoic acid (PABA)Heavy metals such as mercury that is inorganic -HQ (hydroquinone)

#### **Ayurvedic Concept of Cosmetic Toxicity**

Gara Visha, commonly referred to as concocted poisons, are made by mixing non-poisonous

substances that could turn toxic. An additional way to characterize Gara Visha is as artificial poisons. Poisons have a special quality in that they do not metabolize naturally since Apaaki is a Guna of Visha. When nontoxic materials combine, they can also develop this property and act as toxins due to a malfunctioning Biotransformation that can produce a host of pathological reactions that are not compatible with tissue metabolism. The numerous poisoning manifestations, or Gara Visha Adhisthanas, are the bodily mirror images of these diseases. Since these Adhisthanas might appear as acute or immediate symptoms, or as gradual builds over time, they can function as cumulative poisons or Dushi Visha. Sushruta Acharya addresses the possibility of consuming poison from substances like cosmetics that are frequently used for body, skin, and hair massages in Kalpa Sthana.[11]

Ayurveda says there is a connection between cumulative poisoning and *Dushi Visha*. The effects of *Dushi Visha* do not strike suddenly; rather, they come on gradually. Because these toxins accumulate in the body over time and generate harmful effects over a set period of time, they function as cumulative poisons. *Dushi Visha* affects the skin, gastrointestinal tract, nervous system, and other systems of the body, exhibiting a wide spectrum of toxic symptoms and disorders. When poison accumulates over time, cosmetics are permissible. Long-term cosmetic use can have harmful toxic side effects in addition to a host of systemic issues. By using *Shodhana* and *Shamana Chikitsa* in addition to the specific *Ayurvedic* treatment for *Dushi Visha*, these ailments can be cured.<sup>[12]</sup>

#### **DISCUSSION AND CONCLUSION**

Repeated exposure to such chemicals over long periods of time may cause build-up in the body, which the body can finally eliminate and cause symptoms of poisoning. The idea of cosmetic toxicity can be successfully combined with the *Ayurvedic* notions of *Gara Visha* and *Dushi Visha*. The multibillion-dollar global cosmetics industry is profiting billions at the price of the health of its consumers, who are unaware of the risks these products represent to their well-being. Although 90%

of the ingredients used in cosmetics are unsafe for ingestion by humans, governments are not doing enough to halt this dangerous trend. Therefore, consumers should be made aware of these facts and replace these harmful cosmetics with natural, organic, and herbal substitutes. One of *Ayurveda's* own purposes, then, is to maintain beauty.

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