



International Journal of Indian Medicine

www.ijim.co.in

ISSN: 2582-7634

Volume - 7 Issue - 04

April 2026

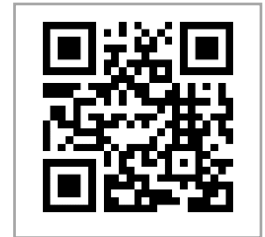


IJIM

INDEXED



International Journal of Indian Medicine



International Category Code (ICC): ICC-1702

International Journal Address (IJA): IJA.ZONE/258276217634

Review of Cosmetic Toxicity

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ABSTRACT:

According to ayurveda a man is perfect when his body and mind both are in equilibrium. Ayurveda defines beauty as the replication of one's inner vitality and balance, highlighting the role of doshas in determining skin type, hair quality and external appearance. Nowadays due to the influence of fast life, fast foods, adulteration, pesticides, environmental pollution people are exposed to toxins from many angles, which one day become excruciating as far as health is concerned. Unsystematic use of all these resources which leads to exogenous or endogenous toxicity. Ayurveda cosmetology gives more focus to diet, detoxification, life style modifications. Ayurveda use oil, herbal products, which are more safe than synthetic products. It's a holistic approach. Here this article highlights the possible toxicities and its prevention. Even though, cosmetics are considered as boon by huge populations globally, the risk and toxicity of the cosmeceuticals are not to be excluded.

KEYWORDS: Toxicity, Cosmetics, Detoxification, Cosmetology

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How to cite this article: Thomas S., Jyothi. Review of Cosmetic Toxicity. Int J Ind Med 2026;7(04):08-12 DOI: <http://doi.org/10.55552/IJIM.2026.7402>

INTRODUCTION:

Agad tantra is a special clinical branch of Ayurveda which was in practice since time immemorial. Agad tantra not only explains about Natural toxins (Sthavara and Jangama visha) but also gives equal importance to artificial toxins (Gara visha, Dooshi visha) also. Gara visha is well explained in all classics and traditional books of Ayurveda. It will take time to get metabolized doesn't cause instantaneous death of a person. Nowadays due to the influence of fast life, fast foods, adulteration, pesticides, environmental pollutants many are suffering from skin related ailments. Haphazard use of all these resources leads to exogenous or endogenous toxicity.

The word cosmetics derived from a Greek word- 'Kosmeticos' which means art of dress and ornament. **FDA** defines cosmetics as the substances which are intended to be applied to the human body for cleansing, beautifying, promoting attractiveness or altering the appearance without affecting the body. Common contaminants found in cosmetics range from lead and asbestos to phthalates and more. They can be found in lipstick, powders, fragrances, nail polish, lotions and other beauty products. The health risks associated with this dangerous list of hidden ingredients include cancer, fertility issues, hormone imbalance and neurological issues etc.

In *ayurveda*, there are many terminologies such as *Sumukha*, *Sudarshana*, *Subhaga*, etc. are used to denote appearances of people and various *Prakriti*, *Sara*, *Samhanana*, *Pramana*, etc. In addition, the importance of *Ritucharya* and *Dinacharya* also used to increase the appearance and physical condition of body.

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 *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. 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 mind, soul, and senses serving as the mental aspect that constitutes health.

MATERIALS AND METHODS:

This review is based on data collected from Classical ayurvedic texts, peer-reviewed research publications, and relevant case studies related to cosmetics.

CLASSIFICATION:

Cosmetics can be broadly classified into 4 categories:

- A. Skin care cosmetics - cleansers, toners, moisturizers, creams, lotions, sunscreens etc.
- B. Hair care cosmetics - shampoo, conditioners, hair spray, gel etc.
- C. Colour/ make up cosmetics - primer, concealer, compact powder, foundation, mascara, eye liner, lip stick, lip liner etc.
- D. Fragrance/ perfumes.

SOME EXAMPLES OF TOXIC CONTENTS IN COSMETICS:

Lead: Carcinogenic ingredient often found in beauty products.

Formaldehyde: Frequently used in nail polish, nail glue and eyelash glue

Triclosan: Often found in body wash and toothpaste

Phthalates: Often found in nail polish, fragrances and hairspray

Parabens: Often used in moisturizers and soaps a harmful heavy metal and naturally occurring impurity that can show up in lipstick and eye products

Toluene: Often found in nail polish

Carbon Black: Often found in mascara, lipstick and eyeliner



HEALTH CONCERNS OF COSMETICS:

- Endocrine Disruption: Parabens and phthalates found in lotions and fragrances mimic hormones, potentially causing thyroid issues, fertility problems, and breast cancer.
- Cancer Risks: Certain ingredients like formaldehyde (a preservative) and contaminants such as arsenic and cadmium are known carcinogens.
- Skin Sensitization and Allergies: Fragrances, preservatives, and dyes frequently cause contact dermatitis, itching, and severe allergic reactions.
- Respiratory Issues: Aerosolized products (hairspray, spray-on makeup) can cause lung damage and trigger asthma.
- Reproductive and Developmental Toxicity: Ingredients like phthalates etc. are linked to developmental delays and reproductive harm, particularly dangerous during pregnancy.

- Heavy Metal Contamination: Cosmetics may contain contaminants like lead, mercury, and arsenic, which cause accumulation of toxins in the body.
- Skin Damage: Excessive use of cosmetics can accelerate skin aging, cause wrinkles, and lead to permanent, dark circles under the eyes.
- Microbial Infections: Contaminated, expired, or poorly preserved products can introduce bacteria and fungi, such as Candida and Aspergillus, to the skin.

HOW TO IDENTIFY TOXIC COSMETICS:

There is no legal way to verify their exactness. Understand the ingredients list in cosmetics is not so easy. 45% of people are aware of toxic chemicals in beauty products. Majority of people never check cosmetic ingredients. Below are few steps to monitor when buying cosmetic products.

- Understand the terminology in makeup products.
- The chemical names can be confusing, as manufacturers often use certain chemicals by alternate names. Check and confirm the names.
- Look for warning labels on packaging.
- Research the chemical ingredients listed.
- Be aware of common hazardous chemicals like lead, mercury, asbestos, benzene, certain pesticides, and some cleaning agents.
- Consult safety data sheets (**SDS**) or seek professional advice from a toxicologist or environmental health experts.

RULES AND LAWS RELATED TO COSMETICS:

Cosmetic Rules of 2020

- Modernized the regulatory framework for cosmetics.
- Clarified and streamlined the requirements for importing, manufacturing, and distributing cosmetics.

- Increased accountability for manufacturers and importers.
- Other relevant laws and regulations
- The Drugs and Cosmetics (Amendment) Act of 2008
- The Right to Information (RTI) Act

HERBAL COSMETOLOGY:

Herbal cosmetology offers safer milder more sustainable alternative to synthetic cosmetics. Blending traditional remedies with modern science provides offering result for those who are seeking natural beauty. It guarantees anti-inflammatory and antioxidant properties. Ayurveda use oil, herbal products, which are more safe than synthetic products. It's a holistic approach that heals both body and mind together.

There is great demand of application of Ayurveda principles in this field. Awareness of the toxic ingredients and utilizing the natural products will help to reduce the incidence of cosmetic toxicity. *Ayurvedic* ideas, including *Vyayama*, *Abhyanga* (massage), various types of *Snana*, etc. and 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. A sound body and mind are important than external beauty.

By adopting the principles of ayurveda and the usage of herbs in cosmetic purpose we can achieve a perfect beauty.

Benefits

- **Hypoallergenic:** Low risk of skin allergic reactions or irritations.
- **Nutrient-Rich:** Contain natural vitamins, antioxidants, and minerals.
- **Effective:** Offer long-term benefits for skin health and appearance rather than immediate but temporary fixes.

- **Eco-friendly:** Generally safer for the environment.

Limitations

- **Slow Action:** Results may not be immediate, requiring consistent use.
- **Allergen Potential:** Despite being natural, some ingredients might still cause allergies in sensitive individuals.

DISCUSSION:

- According to Ayurveda **Nidhan Parivarjanameva Chikitsa**. Prevention is better than cure. it is better to choose good quality assuring products than to treat the consequences.
- Avoid products with triclosan, an agent found in some soaps, deodorants, and acne treatments
- Avoid products with chemicals like toluene, which is toxic to the liver and can cause birth defects
- Avoid products with chemicals like PABA, benzophenone, oxybenzone, ethoxycinnmate, and homosalate, which are endocrine disruptors
- Avoid products with hydroquinone, a lightening agent that's banned in Europe due to toxicity concerns
- Choose non-toxic alternatives.

CONCLUSION:

- The widespread use of cosmetic products is increasingly recognized as a public health, environmental, and social issue. One should be aware of purchasing only safer products or products containing minimal toxic ingredients. Cosmetic toxicity remains a subject of concern and discussion. While it is crucial to acknowledge potential risks associated with certain ingredients of cosmetic products, it is equally important to rely on scientific research, regulatory measures, and informed decision-making. By fostering consumer awareness, supporting

responsible industry practices, and promoting a balanced approach to cosmetic safety, we can reduce the risk associated with its toxicity.

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Authors Contribution: All authors have contributed equally.

Financial Support and Sponsorship: None declared

Conflict of Interest: There are no conflicts of interest.

Declaration of Generative AI and AI Assisted Technologies in the writing process:

The author has used generative AI/AI assisted technologies in the writing process

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An Official Publication of ARCA- AYURVEDA RESEARCH & CAREER ACADEMY

Website: <https://www.ijim.co.in> Email: ijimjournal1@gmail.com

IIFS Impact Factor: 4.125

Frequency of Publication: Monthly