

**CRITICAL REVIEW OF BODY LOTION TOXICITY W.S.R TO
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ABSTRACT

Ayurveda is a science of life which deals with mental, physical, spiritual well being of a person. It not only speaks for curing an ailment but also about how to be healthy and to maintain it. Current generation is captivated more towards occidentalization & cosmetics which are beautifying products that are used to develop the presentation; they are proposed to apply to the human body for cleaning, enlightening, increasing charm of the body. A wide range of chemicals are used in the cosmetics as ingredient, active substances, colorants & preservatives. Cumulative toxicity is the accumulation of the toxins over a period of time & in turn resulting in the harsh effects on the body & mind. This cumulative toxicity is similar to the Dushivisha concept defined by Acharya Sushruta.^[1] The long-term use of body lotions increases skin susceptibility to irritants. Propylene glycol is a recognised neurotoxin & is known to cause contact dermatitis. Lanolin is an animal product; it may also cause allergies.

Retinal palmitate increases the risk of skin cancer when skin is exposed to UV light.

KEYWORDS: Dushivisha, Poison, Cumulative toxicity, Toxins.

INTRODUCTION

Balanced dosha, healthy Agni, a good state of dhatu and their metabolic end products lead to a balanced state of a mana, indriya and atma where all of which leads to a good health.^[2] According to Ayurveda, anticipation of disease and sustenance of health are more important than the alleviation of illness. As given in Ayurvedic Samhitas, a poison is a substance that vitiates the normal functioning of Dosha, Dhatu, Mala. Thousands of harmful toxins are

present in our atmosphere that are ingested by human beings on daily basis. There are eight branches of Ayurveda. One of them is Agada tantra. As described in them, Dushivisha is an intake of toxic drugs which is less potent (Denatured) and remains in a dormant state within the body.^[3] Cumulative toxicity is the accumulation of the toxins over a period of time & in turn resulting in the harsh effects on the body & mind. This cumulative toxicity is similar to the Dushivisha concept defined by Acharya Sushruta.

Everybody wants to have glammers, attractive personality. Since everybody is not born with aspired look, people tend to achieve that by the use of various kinds of cosmetics or beauty treatments in their day-to-day life. All the types of cosmetics & foods we eat sometimes manipulate with the wholesomeness of our tissues, at times pronouncing as ill effects of Dushivisha.

Cosmetics are the ones which enhances the look of the person promoting allure of the person without effecting the structure and function of the body parts. Cosmetic toxicology is the toxicity due to application of cosmetics to human body. Reports have documented that the average man and woman practice six and twelve cosmetic products per day, respectively, in the USA. However, among a list of more than 12,000 industrial and synthetic chemical ingredients included in the formulation of cosmetics, less than 20% of these have been considered safe to use. Body lotions are basically a mixture of water & oils, with an emulsifier added to keep the product from separating. A variety of other chemicals are added to the mixture as moisturizing agents, thickeners & preservatives. By knowing the importance of this sole concept of Ayurveda study was selected to throw a ray of light on the cumulative effect of Body lotions highlighting the Dushivisha concept.

AIMS AND OBJECTIVES

1. To study the concept of Dushivisha.
2. To study the toxic effect of body lotions on the human body.
3. To correlate the Dushivisha w.s.r to cumulative toxicity of body lotions.

MATERIALS AND METHODS

Review of literature regarding Dushivisha is collected from Ayurvedic text books. Review of literature regarding body lotion toxicity is collected from modern science and from different websites and research papers.

CONCEPTUAL STUDY

VYAKTA AWASTHA OF DUSHIVISA: The veerya of Dushivisha being less, it does not show any immediate fatality. On the other hand, it becomes aavritta by Kapha & stays in that state for years and its symptoms do not arise immediately. Arunadutta the commentator of Ashtanga Hrudaya said that Dushivisha is “Avibhavyamana” means which is not traceable due avarana of Kapha. He also mentions “Varshagananubandhi” which says about it’s ability to stay in the body for years together.^[4]

Impact of body lotions on body^[5]

Before reaching out the pretty bottle of lotion on the shelf, know what’s inside. It may not be as innocent as it looks. There are dozens of ingredients currently being used in top brand body lotions that range from questionable to potentially hazardous as the skin is a sensitive organ that can absorb substances that we rub onto our bodies.

a) 1, 4 – DIOXANE: Also Known As: Sodium Laurel Sulfate, Sodium Laureate Sulfate and PEG. Not listed as a separate ingredient. Any ingredient listed with “eth”, polyethylene glycol, polyoxynylene, oxynol.

Found In: 22% of all petroleum-based cosmetics, lotions, soaps, shampoos, cleansers, as well as products that create suds. EWG reported that 46% off all products tested contained 1,4 Dioxane.

Why to Avoid: Human carcinogen, can cause cancer and birth defects.

b) Benzophene: Also Known As: Benzophenone, oxybenzone, sulisobenzene, sulisobenzene sodium, and ingredients containing the word benzophenone.

Found In: Chemical Sunscreens, nail polish, lip treatments, foundations, moisturizers and fragrances. Used as UV blockers.

Why to Avoid: Linked to cancer, endocrine disruption, developmental and reproductive toxicity, organ system toxicity, irritation, and ecotoxicity.

c) Bha & Bht: Also Known As: Butylated Hydroxyanisole and Butylated Hydroxytoluen.

Found In: Lip treatments, color cosmetics and fragrances. Used in moisturizers and cosmetics as preservatives.

Why to Avoid: Can cause endocrine disruption, organ-system toxicity, developmental and reproductive toxicity, cancer, and irritation. Harmful to fish and other wildlife.

- d) Dea Related Ingredients:** Also Known As: Ethanolamine Compounds, Triethanolamine, diethanolamine, DEA, TEA, cocamide DEA, cocamide MEA, DEA-cetyl phosphate, DEA oleth-3 phosphate, lauramide DEA, linoleamide MEA, myristamide DEA, oleamide DEA, stearamide MEA, and TEA-lauryl sulfate.

Found In: Moisturizers, shaving creams, color cosmetics and fragrances. Makes product creamy or sudsy.

Why to Avoid: Can cause cancer, bioaccumulation, organ system toxicity, skin & eye irritation.

- e) Hydroquinone:** Also known As: Hydroquinone or tocopheryl acetate.

Found in: Cleansers, skin lighteners and moisturizers

Why to Avoid: Can cause cancer, organ-system toxicity and respiratory tract irritation.

- f) Parabens:** Also known As: Ethylparaben, butylparaben, methylparaben, propylparaben, isobutylparaben, isopropylparaben, and ingredients ending in –paraben.

Found in: Cleansers, moisturizers, body washes and body scrubs.

Why to Avoid: Can cause endocrine disruption, cancer, developmental and reproductive toxicity.

- g) Perfume (Aka Fragrance):** Also Known As: Complex mixture of over 3000 chemicals are used as fragrance.

Found In: majority of cosmetics and personal care products, even products marked as “unscented”. Perfumes, colognes, deodorants, shampoo, soaps, lotions etc.

Why to Avoid: Triggers allergies & asthma, linked to cancer and neurotoxicity. Some are harmful to fish and wildlife.

- h) Petroleum-By-Products & Mineral Oil:** Also Known As: petroleum jelly, petrolatum, liquid paraffin, Vaseline.

Found In: Moisturizers, lotions, lip treatments, cosmetics, baby products, hair products etc.

Why Avoid: Can't be metabolized and is the greatest contamination of the human body (it gets into your body and will not leave!). Human carcinogen, linked to cancer, linked to estrogen dominance.

- i) **Phenoxyethanol:** Also Known As: Phenoxyethanol, 2-Phenoxyethanol, Euxyl K 400 (mixture of Phenoxyethanol and 1, 2-dibromo-2, 4-dicyanobutane), and PhE.

Found In: Moisturizers, lip treatments, colour cosmetics, hand lotion, body washes and soaps.

Why to Avoid: Can cause allergies and nervous system effects.

- j) **Phthalates:** Also Known As: Phthalate, DEP, DBP, DEHP and fragrance.

Found In: Nail Polish, colour cosmetics, moisturizers and body washes.

Why to Avoid: Can cause endocrine disruption, developmental and reproductive toxicity, and cancer.

- k) **Polyacrylamides:** Also known As: Polyacrylamide, acrylamide, polyacrylate, polyquaternium and acrylate.

Found In: Moisturizers, anti-aging products, colour cosmetics and body lotions.

Why to Avoid: Can cause reproductive and developmental toxicity (when Polyacrylamide breaks down into an acrylamide, which is a carcinogen).

- l) **Siloxane:** Also Known As: cyclomethicone, ingredients ending in “-siloxane” or “-methicone”, D₃, D₄ and D₅ and D₆.

Found In: silicone-based products used to soften, smooth and moisten. "Oil-Free" makeup products. They make hair and cosmetic products dry more quickly and deodorants creams slide on more easily.

Why to Avoid: endocrine disruptor, reproductive toxicant, cancer, influence neurotransmitters in the nervous system. Harmful to fish and wildlife.

DISCUSSION

Body lotions when applied repeatedly, they get accumulated in skin which does not get eliminated from the body by any means and it shows cumulative effect on the body. Then there will be production of symptoms likes patches, allergic rashes, red spots which is similar to Dushivisha. Some poisons produce insanity, abdominal distension, Shukra Kshaya, muffled voice while other causes Kustha & respective disorders of various type.

CONCLUSION

The clinical manifestations resulting from prolonged exposure to cosmetics closely resemble those of Dushivisha. As described by Acharya Sushruta, Dushivisha can lead to Bhinna-

purisha varna, Vigandha- vairasya mukha, Pipasa, Murcha, Vamana, Gadgada vaak, Dushyodara. According to site when Dushivisha is retained in Amashaya it produces the diseases due to derangement of Kapha and Vata doshas. When located in Pakwashaya, it produces diseases of deranged Vata and Pitta doshas.

When Dushivisha staying in Rasadi dhatus following symptoms appears.^[7]

Rasadhatu - Aruchi, Ajirna, Raktadhatu - Kushta, Visarpa, Mamsadhatu - Mamsarbuda, Medhadhatu - Medogranti, Asthidhatu - adhidantadi vikara, Majjadhatu - Tamodarshan, Shukradhatu - klaibya.

The long-term use of above discussed cosmetics produces various toxic effects & complications. They cause respiratory irritation, nervous disturbances, contact dermatitis, allergies, damage of skin DNA, skin cancer, asthma, ovarian cancer, endocrine disruptions, disturbance of hormone system, birth defects like cleft palate, thyroid function disorders, nervous system disorders, breast cancer etc.

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