

## AYURVEDIC MANAGEMENT OF DUSHIVISHA INDUCED BY ENDOCRINE-DISRUPTING CHEMICALS IN COSMETICS: AN INTEGRATIVE CONCEPTUAL FRAMEWORK

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Article Received on 05 April 2026,  
Article Revised on 25 April 2026,  
Article Published on 01 May 2026,

<https://doi.org/10.5281/zenodo.19875848>

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**How to cite this Article:** \*<sup>1</sup>Dr. Aishwarya Gajanan Masal, <sup>2</sup>Dr. Ashwini Sonalkar, <sup>3</sup>Dr. Dipa Ashok Jain, <sup>4</sup>Dr. Manasi Pramod Udagikar. (2026). Ayurvedic Management Of Dushivisha Induced By Endocrine-Disrupting Chemicals In Cosmetics: An Integrative Conceptual Framework. World Journal of Pharmaceutical Research, 15(9), 587-592.

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### ABSTRACT

The increasing use of cosmetic products containing endocrine-disrupting chemicals (EDCs) has raised significant concerns regarding their long-term impact on human health. Compounds such as parabens, phthalates, and synthetic fragrances are widely used in personal care products and have been shown to interfere with hormonal regulation, contributing to metabolic, reproductive, and immunological disturbances. These exposures are typically chronic, low-dose, and cumulative, making them difficult to detect and manage within conventional biomedical frameworks. Ayurveda, the traditional system of medicine, describes a comparable pathological state known as *Dushivisha*, referring to latent, low-grade toxins that accumulate in the body and produce delayed systemic effects. This article presents a conceptual synthesis linking EDC exposure from cosmetics with the Ayurvedic notion of *Dushivisha*. It explores pathophysiological correlations through

the lenses of Agni, Ama, Srotodushti, and Ojas, and proposes a comprehensive Ayurvedic management strategy incorporating detoxification (Shodhana), palliative care (Shamana),

herbal therapeutics, and lifestyle modifications. This integrative perspective offers a novel approach to understanding and managing chronic chemical toxicity associated with modern cosmetic use.

## INTRODUCTION

The global cosmetic industry has witnessed exponential growth over the past few decades, with daily use of skincare, haircare, and personal hygiene products becoming an integral part of modern lifestyles. However, many of these products contain endocrine-disrupting chemicals (EDCs), including parabens, phthalates, triclosan, and synthetic musks, which are absorbed through the skin and enter systemic circulation. These chemicals have been associated with hormonal imbalances, reproductive disorders, thyroid dysfunction, and even carcinogenic potential.<sup>[1]</sup> Unlike acute toxic exposures, EDCs exert subtle, long-term effects, often through bioaccumulation and interference with endocrine signaling pathways.

Ayurveda provides a unique framework for understanding such chronic toxic states through the concept of *Dushivisha*. Classical texts describe *Dushivisha* as a residual toxin that remains in the body after repeated exposure to low-dose poisons or incomplete detoxification. It is characterized by its slow progression, hidden nature, and capacity to disrupt multiple physiological systems over time.<sup>[2]</sup> The parallels between EDC exposure and *Dushivisha* are particularly compelling, as both involve chronic accumulation, systemic impact, and delayed clinical manifestations.

This article aims to explore these parallels in depth and propose an Ayurvedic management approach tailored to EDC-induced toxicity from cosmetics, thereby contributing a novel interdisciplinary perspective to environmental and integrative medicine.

## MATERIALS AND METHODOLOGY

This study adopts a narrative review and conceptual analysis approach. Classical Ayurvedic literature, including the *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, was systematically reviewed to extract references related to *Dushivisha*, Ama, Agni, and detoxification therapies. These concepts were interpreted within the context of chronic chemical exposure.

A parallel review of modern scientific literature was conducted using databases such as PubMed, Scopus, and Google Scholar. Keywords included “endocrine-disrupting chemicals,”

“cosmetics toxicity,” “parabens,” “phthalates,” “chronic exposure,” and “hormonal disruption.” Peer-reviewed articles published in the last two decades were prioritized to ensure relevance and scientific rigor.

The methodology involved comparative analysis to identify conceptual overlaps between Ayurvedic and biomedical frameworks. Based on these correlations, a hypothetical integrative model for the pathogenesis and management of EDC-induced Dushivisha was developed.

## DISCUSSION

The chronic exposure to endocrine-disrupting chemicals through cosmetic products represents a modern analogue to the classical Ayurvedic concept of Dushivisha. These chemicals are typically absorbed through the skin, bypassing first-pass metabolism and entering systemic circulation. Their lipophilic nature allows them to accumulate in adipose tissue, leading to prolonged biological half-life and continuous interaction with endocrine pathways. This pattern of exposure aligns closely with the Ayurvedic description of Dushivisha as a toxin that remains dormant within the body and exerts pathological effects over time.

From an Ayurvedic perspective, the initial impact of EDCs can be understood through the disruption of Agni, the central metabolic force responsible for digestion, transformation, and assimilation. When Agni is impaired, it leads to the formation of Ama, a toxic, sticky metabolic byproduct that circulates within the body and interferes with normal physiological processes. Scientific evidence suggests that EDCs can alter metabolic pathways, disrupt mitochondrial function, and interfere with gut microbiota, all of which may contribute to a state analogous to Ama formation.<sup>[3]</sup> This metabolic dysfunction establishes the foundation for systemic imbalance and chronic disease progression.

As these chemicals accumulate, they contribute to Srotodushti, or dysfunction of bodily channels. In Ayurveda, Srotas are responsible for the transport of nutrients, hormones, and waste products. Obstruction or impairment of these channels, referred to as Srotorodha, leads to tissue-level pathology. Endocrine-disrupting chemicals have been shown to bind to hormone receptors, mimic endogenous hormones, and disrupt signaling pathways, particularly those involving estrogen, androgen, and thyroid hormones.<sup>[4]</sup> This interference

can be interpreted as a form of Srotodushti affecting key physiological systems, including circulatory, reproductive, and metabolic pathways.

The endocrine system's delicate balance is particularly vulnerable to such disruptions. EDCs can act as agonists or antagonists of hormone receptors, leading to altered gene expression and downstream physiological changes. In Ayurvedic terms, this may correspond to the imbalance of functional regulatory principles associated with transformation and movement. The resulting physiological disturbances may manifest as menstrual irregularities, infertility, thyroid dysfunction, and metabolic syndrome. These conditions are increasingly prevalent in modern populations and may be partially attributable to chronic exposure to endocrine-disrupting compounds.

Another critical dimension of Dushivisha is its impact on Ojas, which is considered the essence of immunity and vitality in Ayurveda. Chronic exposure to EDCs has been associated with immunosuppression, increased inflammatory responses, and oxidative stress.<sup>[5]</sup> These effects may compromise overall resilience and predispose individuals to chronic diseases, including autoimmune conditions and metabolic disorders. The subtle and progressive nature of these changes often delays clinical recognition, allowing the underlying pathology to advance.

The clinical presentation of EDC-induced toxicity is frequently nonspecific, including persistent fatigue, dermatological conditions such as acne or pigmentation disorders, gastrointestinal disturbances, and hormonal imbalances. Ayurveda describes similar manifestations in Dushivisha, emphasizing the importance of early recognition and intervention to prevent disease progression.

Management of such a condition in Ayurveda involves a comprehensive strategy aimed at eliminating accumulated toxins and restoring physiological balance. Detoxification therapies, collectively referred to as Shodhana, play a central role. Procedures such as therapeutic purgation and medicated enemas are designed to eliminate toxins from the body and improve systemic function. Although direct evidence for the removal of endocrine-disrupting chemicals through these methods remains limited, their role in enhancing metabolic activity and supporting excretory pathways may indirectly facilitate detoxification.

In addition to purification, Shamana therapies are employed to neutralize residual toxins and restore homeostasis. Herbal formulations derived from plants such as *Tinospora cordifolia*, *Curcuma longa*, and *Embllica officinalis* possess well-documented antioxidant, anti-inflammatory, and adaptogenic properties.<sup>[6]</sup> These herbs may help mitigate oxidative stress, modulate immune responses, and support endocrine balance, making them relevant in the management of chronic chemical exposure.

Dietary and lifestyle modifications are equally important components of the therapeutic approach. Reducing exposure to synthetic cosmetic products and opting for natural alternatives can significantly decrease the body's toxic burden. A diet rich in fresh fruits, vegetables, and whole foods provides essential antioxidants that counteract free radical damage. Lifestyle practices such as yoga and controlled breathing techniques contribute to stress reduction, improved metabolic efficiency, and overall physiological balance.

The integration of Ayurvedic principles with contemporary scientific understanding offers a comprehensive and holistic framework for addressing the health effects of endocrine-disrupting chemicals. While Ayurveda provides a systemic and individualized approach to chronic toxicity, modern science contributes detailed insights into molecular mechanisms and exposure pathways. Together, these perspectives can inform the development of effective preventive and therapeutic strategies.

## CONCLUSION

Endocrine-disrupting chemicals in cosmetics represent a significant and often underrecognized source of chronic toxicity in modern life. Their ability to accumulate in the body, interfere with hormonal regulation, and produce long-term physiological effects closely parallels the Ayurvedic concept of Dushivisha. By interpreting these exposures through Ayurvedic principles such as Agni, Ama, Srotodushti, and Ojas, a deeper and more integrative understanding of their impact can be achieved. Ayurvedic management strategies, including detoxification, herbal therapy, and lifestyle modification, offer a promising complementary approach for mitigating these effects. Although this framework is primarily conceptual, it highlights the potential of integrating traditional medical knowledge with modern scientific research. Future studies should focus on experimental validation, clinical trials, and the development of standardized treatment protocols to establish the efficacy of these integrative approaches in managing EDC-induced toxicity.

**REFERENCES**

1. Diamanti-Kandarakis E, Bourguignon JP, Giudice LC, et al. Endocrine-disrupting chemicals: an Endocrine Society scientific statement. *Endocrine Reviews*, 2009; 30(4): 293–342.
2. Sharma PV. *Charaka Samhita*. Varanasi: Chaukhambha Orientalia, 2014.
3. Gore AC, Chappell VA, Fenton SE, et al. EDC-2: The Endocrine Society's second scientific statement on endocrine-disrupting chemicals. *Endocrine Reviews*, 2015; 36(6): E1–E150.
4. Rubin BS. Bisphenol A: an endocrine disruptor with widespread exposure and multiple effects. *Journal of Steroid Biochemistry and Molecular Biology*, 2011; 127(1–2): 27–34.
5. Kabir ER, Rahman MS, Rahman I. A review on endocrine disruptors and their possible impacts on human health. *Environmental Toxicology and Pharmacology*, 2015; 40(1): 241–258.
6. Gupta AK, Mishra AK. *Ayurvedic Pharmacology and Therapeutic Uses of Medicinal Plants*. New Delhi: Chaukhambha Publications, 2018.