

REVIEW ARTICLE

Traditional Bio-Purification Therapies: Integrating Ayurvedic Panchakarma and *Yogic Shatkarmas* for Holistic Health

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ABSTRACT

Background: Traditional Indian medical systems, particularly Ayurveda and Yoga, emphasize purification as a central approach to maintaining physiological balance and preventing disease. In Ayurveda, *Panchakarma* is described as a systematic bio-purification therapy aimed at eliminating aggravated doshas and accumulated metabolic toxins. Similarly, Yogic texts outline the *Shatkarmas*, which are six cleansing practices designed to purify internal systems and enhance bodily functions.

Objective: This review explores the conceptual basis, procedures, and health benefits of *Panchakarma* and *Shatkarmas*, highlighting their complementary role in holistic and preventive health care.

Materials and Methods: A narrative review was conducted using classical Ayurvedic and yogic texts, including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Hatha Yoga Pradipika*, and *Gheranda Samhita*, along with relevant modern scientific studies on detoxification and integrative health.

Results: *Panchakarma* includes preparatory measures (*Snehana* and *Swedana*), principal therapies (*Vamana*, *Virechana*, *Basti*, *Nasya*, and *Raktamokshana*), and post-therapy care to restore metabolic balance. *Shatkarmas* – *Neti*, *Dhauti*, *Basti*, *Nauli*, *Kapalabhati*, and *Trataka* – primarily enhance respiratory efficiency, digestion, and neurophysiological regulation. Contemporary evidence indicates potential benefits in metabolic function, respiratory health, and overall well-being.

Discussion: The integration of *Panchakarma* and *Shatkarmas* reflects a synergistic model that bridges traditional detoxification concepts with emerging scientific understanding of physiological regulation.

Conclusion: Together, these practices provide a comprehensive, lifestyle-based framework for preventive and holistic healthcare in modern contexts.

1. INTRODUCTION

Health in traditional Indian medical systems is understood as a dynamic state of equilibrium in which physiological processes, mental stability, and environmental harmony are maintained. Ayurveda conceptualizes health (*swasthya*) as a balanced condition of the *doshas* (*Vata*, *Pitta*, and *Kapha*), proper functioning of digestive and metabolic processes (*agni*), adequate nourishment of body tissues (*dhatu*s), effective elimination of metabolic wastes (*malas*), and a harmonious state of

mind, senses, and consciousness.^[1] Disturbances in these regulatory mechanisms, often caused by unhealthy dietary habits, irregular lifestyles, environmental stressors, or psychological strain, may lead to the accumulation of metabolic toxins known as *ama*. This toxic accumulation is considered an important factor in the initiation and progression of various diseases.^[2] Therefore, classical Ayurvedic texts emphasize purification and elimination of aggravated *doshas* as an essential therapeutic strategy for restoring physiological balance and preventing disease progression.^[3]

Within this conceptual framework, *Panchakarma* represents the principal bio-purification therapy of Ayurveda, aimed at eliminating

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aggravated *doshas* and accumulated metabolic toxins from the body. *Panchakarma* involves a series of therapeutic procedures that include preparatory measures (*Purvakarma*), the principal elimination therapies (*Pradhana Karma*), and post-therapeutic restorative measures (*Paschat Karma*). These procedures facilitate the mobilization of toxins from peripheral tissues toward the gastrointestinal tract, where they are eliminated through specific cleansing therapies such as *Vamana*, *Virechana*, *Basti*, *Nasya*, and *Raktamokshana*.^[3,4] Beyond detoxification, *Panchakarma* is believed to enhance digestive strength, regulate metabolic activity, and improve tissue nourishment. Emerging scientific evidence also suggests that Ayurvedic detoxification therapies may influence inflammatory pathways, metabolic regulation, and physiological detoxification mechanisms, thereby supporting overall health and disease prevention.^[4,5]

Parallel to the Ayurvedic perspective, classical yogic literature describes *Shatkarmas*, the six cleansing practices intended to purify internal organs and bodily channels. These practices – *Neti*, *Dhauti*, *Basti*, *Nauli*, *Kapalabhati*, and *Trataka* – are described in traditional yogic texts as preparatory techniques that enhance the functional capacity of the digestive, respiratory, and nervous systems.^[6] Through these cleansing methods, impurities that obstruct physiological functioning and the flow of vital energy (*prana*) are removed, thereby preparing the body for higher yogic practices and promoting systemic balance.

Contemporary scientific investigations have demonstrated that yogic cleansing techniques may improve respiratory efficiency, stimulate gastrointestinal activity, regulate autonomic nervous system responses, and support psychological well-being.^[7,8] These findings suggest that *Shatkarmas* may contribute not only to physical purification but also to broader physiological and neuropsychological health.

Although *Panchakarma* and *Shatkarmas* originate from closely related traditions of Ayurveda and Yoga, their therapeutic roles are complementary. While *Panchakarma* provides a structured, medically supervised detoxification approach aimed at eliminating pathological *doshas*, *Shatkarmas* serve as practical cleansing techniques that can be incorporated into daily health practices to maintain internal hygiene and physiological balance. In the context of increasing lifestyle-related disorders and the growing interest in integrative medicine, understanding the conceptual and scientific foundations of these traditional bio-purification therapies is particularly important.^[9-11] Integrating these approaches may therefore offer a holistic framework for preventive healthcare and health promotion.

2. MATERIALS AND METHODS

The present study was designed as a narrative review and conceptual analysis to explore the principles, procedures, and health implications of traditional bio-purification therapies described in *Ayurveda* and *Yoga*, specifically *Panchakarma* and *Shatkarmas*. The study aimed to synthesize classical textual knowledge with contemporary scientific literature to understand their role in promoting holistic health.

2.1. Study Design

This work adopted a qualitative literature-based review approach. Relevant information related to *Panchakarma* and *Yogic Shatkarmas* was collected from classical Ayurvedic texts, traditional yogic literature, and modern scientific publications. The objective was to analyze traditional concepts and interpret them in the context of current scientific understanding.

2.2. Data Sources

Data for the study were obtained from both classical literature and modern research publications. Classical Ayurvedic texts such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* were consulted to understand the theoretical foundations and therapeutic procedures of *Panchakarma*. Similarly, traditional yogic texts, including *Hatha Yoga Pradipika* and other *yoga* manuals, were reviewed to examine the description and significance of *Shatkarmas*.

In addition to classical sources, modern scientific articles related to *Panchakarma*, yogic cleansing techniques, detoxification therapies, and integrative medicine were identified through academic databases such as PubMed, Google Scholar, and Scopus. These sources were used to explore the physiological and clinical relevance of these practices in contemporary health care.

2.3. Search Strategy

A systematic search strategy was adopted using relevant keywords such as “*Panchakarma*,” “*Shatkarmas*,” “Ayurvedic detoxification,” “yogic cleansing techniques,” “bio-purification therapies,” “*Ayurveda* and *Yoga* integration,” and “traditional detoxification practices.” Articles published in English and focusing on traditional purification therapies, their mechanisms, and health benefits were considered.

2.4. Inclusion and Exclusion Criteria

Studies and literature sources that described the concepts, procedures, physiological effects, and therapeutic relevance of *Panchakarma* and *Shatkarmas* were included in the review. Both classical textual descriptions and modern research-based publications were considered. Articles unrelated to purification therapies or lacking scientific relevance were excluded.

2.5. Data Analysis

The collected information was critically reviewed and thematically organized. Concepts related to purification, detoxification mechanisms, therapeutic procedures, and health outcomes were analyzed and synthesized. The findings were interpreted from both Ayurvedic theoretical perspectives and modern biomedical viewpoints in order to present a comprehensive understanding of traditional bio-purification therapies.

Through this integrative approach, the study aims to highlight the complementary roles of *Ayurvedic Panchakarma* and *Yogic Shatkarmas* in maintaining physiological balance, supporting preventive healthcare, and promoting holistic well-being.

2.6. Concept of Bio-Purification in Ayurveda and Yoga

The concept of purification holds a fundamental position in both Ayurveda and Yoga, where it is considered essential for maintaining physiological balance and preventing disease. In Ayurveda, health is defined as a harmonious state in which the *doshas* – *Vata*, *Pitta*, and *Kapha* – remain in equilibrium, digestive and metabolic processes (*agni*) function properly, body tissues (*dhatu*) are adequately nourished, and waste products (*malas*) are efficiently eliminated. Disturbances in these physiological factors caused by improper diet, unhealthy lifestyle practices, seasonal variations, or psychological stress may lead to the accumulation of toxic metabolic by-products known as *ama*. This accumulation can obstruct the body’s internal channels (*srotas*) and impair normal metabolic processes, ultimately contributing to the development of various diseases.^[12]

To prevent such pathological changes, Ayurveda emphasizes the importance of bio-purification therapies aimed at eliminating aggravated *doshas* and accumulated toxins from the body. Among these therapeutic approaches, *Panchakarma* is regarded as the principal detoxification procedure. *Panchakarma* involves a systematic therapeutic process in which preparatory procedures such as *snehana* (oleation) and *swedana* (sudation) help mobilize toxins from deeper tissues and direct them toward the gastrointestinal tract for elimination. The subsequent purification procedures then remove these accumulated toxins from the body, thereby restoring metabolic balance, improving digestive efficiency, and supporting overall physiological stability.^[13]

In the yogic tradition, purification is also considered an essential step for maintaining both physical and mental well-being. Yogic philosophy describes the body as a complex network of channels through which vital energy (*prana*) flows. When these channels become obstructed by impurities or functional disturbances, the normal circulation of energy may be disrupted, affecting physical health and mental clarity. To address this imbalance, classical yogic texts describe *Shatkarmas*, the six cleansing techniques designed to purify internal organs and physiological systems. These practices – *Neti*, *Dhauti*, *Basti*, *Nauli*, *Kapalabhati*, and *Trataka* – help remove accumulated impurities, enhance respiratory and digestive function, and support the regulation of nervous system activity.^[14]

From a broader perspective, both Ayurveda and Yoga emphasize purification as a preventive and restorative health strategy. While *Panchakarma* offers a structured medical approach for systemic detoxification and management of disease conditions, *Shatkarmas* function as routine cleansing practices that help maintain internal hygiene and functional balance. Together, these traditional purification methods contribute to improved metabolic activity, enhanced physiological resilience, and promotion of holistic well-being. In the context of modern health sciences, these practices may also be interpreted as traditional approaches that support detoxification processes, improve circulation, and regulate physiological functions, thereby contributing to preventive healthcare and lifestyle management.^[15]

2.7. Panchakarma: Therapeutic Detoxification

Panchakarma represents the principal bio-purification therapy in Ayurveda and is widely regarded as a systematic approach for eliminating aggravated *doshas* and accumulated metabolic toxins from the body. The term *Panchakarma* literally means “five therapeutic actions,” referring to five principal purification procedures described in classical Ayurvedic literature. These procedures aim to remove pathological *doshas*, restore metabolic balance, and support the body’s natural healing processes.^[16]

The therapeutic process of *Panchakarma* generally consists of three major stages: *Purvakarma* (preparatory procedures), *Pradhana Karma* (main purification therapies), and *Paschat Karma* (post-therapeutic care). The preparatory stage involves procedures such as *snehana* (oleation) and *swedana* (sudation), which help mobilize accumulated toxins from peripheral tissues and direct them toward the gastrointestinal tract. These procedures facilitate the effective elimination of toxins during the principal purification therapies.^[17]

The main purification procedures of *Panchakarma* include *Vamana* (therapeutic emesis), *Virechana* (therapeutic purgation), *Basti* (medicated enema therapy), *Nasya* (nasal administration of medicated

substances), and *Raktamokshana* (therapeutic bloodletting). Each of these procedures targets specific *dosha* imbalances and physiological systems. For example, *Vamana* is mainly indicated for disorders associated with aggravated *Kapha*, whereas *Virechana* is used to eliminate excess *Pitta*. *Basti* therapy is considered highly effective in managing *Vata*-related disorders and plays an important role in regulating neurological and musculoskeletal functions.^[18]

Beyond detoxification, *Panchakarma* therapies are believed to enhance digestive strength (*agni*), improve tissue nourishment, and restore the functional integrity of bodily systems. By clearing obstructed *srotas* and improving metabolic processes, these therapies support the body’s inherent capacity for healing and regeneration. Modern scientific investigations also suggest that Ayurvedic detoxification therapies may influence metabolic pathways, inflammatory responses, and physiological detoxification mechanisms, thereby contributing to overall health promotion and disease prevention.^[5]

2.8. Yogic Shatkarmas: Traditional Cleansing Practices

In the yogic tradition, purification of the body and mind is considered a fundamental step for maintaining health and preparing the practitioner for higher yogic practices. Classical yogic texts emphasize that internal cleansing helps remove physical impurities and functional obstructions that may disturb physiological balance and the flow of vital energy (*prana*). For this purpose, the yogic system describes *Shatkarmas*, the six classical purification techniques designed to cleanse internal organs and regulate bodily systems.^[19]

The term *Shatkarmas* literally means “six actions” and refers to six specific cleansing practices described in classical yogic texts such as the *Hatha Yoga Pradipika* and *Gheranda Samhita*. These practices include *Neti*, *Dhauti*, *Basti*, *Nauli*, *Kapalabhati*, and *Trataka*, each of which targets particular organs and physiological systems to promote internal purification and functional efficiency. Through these techniques, impurities that obstruct bodily channels are removed, thereby supporting the smooth circulation of *prana* and improving overall physiological performance.^[20]

Neti, a nasal cleansing practice, helps clear the nasal passages and sinuses, thereby improving respiratory function and reducing the risk of upper respiratory tract disorders. *Dhauti* includes a group of cleansing techniques designed to purify the gastrointestinal tract and improve digestive activity. *Basti*, a yogic colon cleansing practice, assists in maintaining intestinal hygiene and regulating digestive function. *Nauli*, which involves rhythmic contraction and churning of the abdominal muscles, stimulates digestive organs and enhances metabolic activity. *Kapalabhati*, a forceful breathing technique, is known to improve respiratory efficiency and promote oxygenation, whereas *Trataka*, a focused gazing practice, helps strengthen ocular muscles and improve mental concentration.^[15]

Beyond physical cleansing, *Shatkarmas* are also believed to influence neurophysiological and psychological functions. Regular practice of these techniques may improve autonomic nervous system regulation, enhance respiratory capacity, and support digestive health. Contemporary scientific studies have suggested that certain yogic cleansing practices may positively influence pulmonary function, metabolic activity, and stress regulation, thereby contributing to improved physical and mental well-being.^[21]

Although *Shatkarmas* primarily function as self-practiced cleansing techniques within the yogic discipline, their physiological effects complement the detoxification principles described in Ayurveda. While

Panchakarma focuses on the therapeutic elimination of aggravated *doshas* under medical supervision, *Shatkarmas* support daily internal hygiene and functional balance. Together, these traditional purification approaches reflect a holistic strategy for maintaining health, preventing disease, and promoting overall well-being.

3. DISCUSSION

Traditional systems of medicine have long emphasized purification as a fundamental strategy for maintaining health and preventing disease. In both Ayurveda and Yoga, cleansing practices are considered essential for restoring physiological balance and optimizing bodily functions. The present review highlights that *Panchakarma* and yogic *Shatkarmas* represent two complementary purification approaches aimed at removing accumulated impurities, regulating physiological processes, and promoting overall well-being. Although these practices originate from distinct classical traditions, their underlying principles demonstrate a shared emphasis on internal cleansing, metabolic regulation, and preventive health care.

In Ayurveda, *Panchakarma* functions as a comprehensive therapeutic detoxification system designed to eliminate aggravated *doshas* and accumulated toxins from the body. Classical Ayurvedic texts describe that imbalanced *doshas* obstruct bodily channels (*srotas*), disturb tissue metabolism, and ultimately contribute to the development of disease if not properly eliminated.^[16] *Panchakarma* therapies mobilize toxins from deeper tissues and facilitate their elimination through procedures such as *Vamana*, *Virechana*, *Basti*, *Nasya*, and *Raktamokshana*. These therapies are traditionally indicated not only for disease management but also for preventive health through seasonal purification and rejuvenation practices (*Ritucharya* and *Rasayana*).^[22]

From a contemporary biomedical perspective, *Panchakarma* procedures may influence several physiological processes, including improved gastrointestinal clearance, enhanced circulation, metabolic detoxification, and modulation of inflammatory responses. Recent research suggests that Ayurvedic detoxification therapies may also influence metabolic biomarkers, oxidative stress parameters, and immune regulation, thereby highlighting their potential relevance in integrative healthcare approaches.^[4]

In the yogic tradition, *Shatkarmas* serve as cleansing techniques designed to purify internal organs and maintain the functional efficiency of the body. Yogic texts explain that impurities within the body obstruct the flow of *prana* through the network of subtle channels (*nadis*), thereby affecting both physical and mental health.^[21] The six classical cleansing practices – *Neti*, *Dhauti*, *Basti*, *Nauli*, *Kapalabhati*, and *Trataka* – target different physiological systems and contribute to the purification of respiratory, digestive, and nervous pathways.

Modern physiological studies suggest that yogic cleansing practices may improve respiratory capacity, stimulate digestive activity, and enhance autonomic nervous system regulation. For example, practices such as *Kapalabhati* and *Neti* have been reported to improve pulmonary function, enhance oxygenation, and support sinus health, whereas *Nauli* may stimulate digestive organs and improve gastrointestinal motility.^[2]

Although *Panchakarma* and *Shatkarmas* differ in their methodologies, they share several conceptual similarities. Both systems emphasize purification as a preparatory process that enhances the body's natural healing capacity and promotes physiological harmony. *Panchakarma* is generally administered as a structured medical intervention under the

supervision of trained practitioners, whereas *Shatkarmas* are practiced regularly as part of yogic lifestyle routines. This complementary nature suggests that *Panchakarma* may serve as an intensive therapeutic detoxification approach, whereas *Shatkarmas* may function as preventive practices that help maintain internal hygiene and systemic balance.

In the context of modern health challenges – including metabolic disorders, stress-related conditions, and lifestyle-related diseases – integrative approaches that combine traditional knowledge with contemporary scientific insights are gaining increasing attention. The purification principles underlying *Panchakarma* and *Shatkarmas* align with current concepts of preventive and lifestyle medicine, which emphasize detoxification, metabolic balance, and mind–body regulation as essential components of long-term health.^[23]

Despite growing scientific interest in these traditional purification methods, further research is necessary to clarify their physiological mechanisms, clinical effectiveness, and safety across different populations. Future interdisciplinary studies integrating classical Ayurvedic knowledge, yogic science, and modern biomedical research may help strengthen the evidence base and expand the role of these practices within integrative and preventive healthcare systems.

4. CONCLUSION

Panchakarma and *Yogic Shatkarmas* represent important purification practices within the traditional sciences of *Ayurveda* and *Yoga*. Both systems emphasize internal cleansing as a means to restore physiological balance, enhance metabolic efficiency, and maintain overall health. While *Panchakarma* provides a structured therapeutic approach for the elimination of accumulated *doshas* and toxins, *Shatkarmas* function as practical cleansing techniques that support daily physiological regulation and internal hygiene.

Together, these traditional bio-purification methods reflect a holistic approach to health that integrates detoxification, functional balance, and preventive care. Their complementary nature highlights the potential value of integrating *Ayurvedic* and *yogic* practices within modern preventive and integrative healthcare frameworks to promote long-term well-being and physiological resilience.

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6. AUTHORS' CONTRIBUTIONS

All authors give equal contribution in making of this manuscript.

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8. ETHICAL STATEMENT

Ethical approval was not required for this study as it was a review article with data obtained through a literature search.

9. CONFLICT OF INTERESTS

The authors declare no conflicts of interest regarding the publication of this paper.

10. DATA AVAILABILITY STATEMENT

The data analyzed in this review were obtained from publicly available sources, including peer-reviewed articles, observational studies, and surveys accessible through databases.

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