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A Review on Synergetic Effect of Intermittent Fasting and Ayurvedic Principles on Lifestyle Disorders

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Abstract

Lifestyle disorders such as obesity, type 2 diabetes, hypertension, and metabolic syndrome are on the rise globally due to poor diet, sedentary habits, and stress. Both intermittent fasting (IF) and Ayurvedic principles emphasize natural rhythms, digestion, and detoxification of the body, offering promising non-pharmacological approaches to address these disorders. The goal of this article is to review and analyze the synergistic effect of intermittent fasting and Ayurvedic principles in the prevention and management of lifestyle disorders. A narrative review was conducted using classical Ayurvedic texts and modern scientific literature from Research journals, Portals, Blogs. Studies discussing the physiological effects of IF and Ayurvedic regimens such as *Dinacharya*, *Ritucharya* and *Upavasa* were included to explore conceptual and practical overlaps. The combined approach of IF and Ayurveda shows enhanced benefits in metabolic regulation, hormonal balance, inflammation reduction, digestive function (Agni), reduction of metabolic toxins (Ama) and circadian alignment. Both systems support improved insulin sensitivity, weight control, and gut health, with Ayurveda offering personalized dietary and lifestyle guidance that complements IF. Further clinical research is needed to validate these integrative protocols and promote their practical application in modern healthcare.

Keywords: *Ayurveda, Metabolic syndromes, Obesity, Lifestyle disorders, Ama, Dosha imbalance, Ahar-matra*

INTRODUCTION

The escalating global burden of lifestyle disorders, including obesity, type 2 diabetes

mellitus (T2DM), cardiovascular diseases (CVD), and metabolic syndrome represents one of the most significant public health

challenges of the 21st century.¹ *Intermittent Fasting (IF)* is a dietary approach in which food intake is restricted to specific time periods, alternating with periods of fasting. Common IF protocols are *16/8 Method* – Fast for 16 hours, eat during an 8-hour window and *5:2 Diet Method* – Eat normally for 5 days, restrict calories (~500–600 kcal) for 2 non-consecutive days.² *Metabolic Syndrome* is a cluster of interrelated metabolic abnormalities that increase the risk of cardiovascular disease (CVD), type 2 diabetes mellitus (T2DM), and stroke. It is characterized by obesity, insulin resistance, hypertension, dyslipidemia, and glucose intolerance.

Ayurveda, the ancient a vaidic system of medicine, emphasizes health as a dynamic balance between the body (*Sharira*), mind (*Manas*), and environment. It advocates personalized, preventive, and promotive healthcare based on individual constitution (*Prakriti*), digestive fire (*Agni*), biological rhythms (*Dinacharya* and *Ritucharya*), and detoxification methods such as *Upavasa* (therapeutic fasting). *Upavasa* has been described as an essential tool for stimulating *Agni*, eliminating *Ama* (toxins), pacifying imbalanced *Doshas*, especially Kapha and Meda (fat).³

The *Āma* refers to the toxic, undigested metabolic waste that forms in the body due to impaired digestion (*Agnimandya*). It is sticky, heavy, and obstructive, and is considered the root cause of many diseases.⁴

Intermittent Fasting (IF) has emerged as a prominent dietary pattern with compelling evidence supporting its benefits for metabolic health, weight management, and cellular repair mechanisms⁵. Concurrently, *Ayurveda*, the traditional Indian system of medicine dating back millennia, offers a comprehensive

framework for health centered on individualized balance, dietary routines aligned with natural rhythms (*Dinacharya*, *Ritucharya*), and the concept of digestive fire (*Agni*)⁶.

This article explores the conceptual and practical synergy between intermittent fasting and *Ayurvedic* principles, reviews classical *Ayurvedic* texts along with contemporary scientific literature, and evaluates how their combined application can offer a potent strategy in the management and prevention of lifestyle-related disorders.

MATERIALS AND METHODS

This study adopts a systematic review and integrative approach, combining both classical *Ayurvedic* principles and modern scientific findings on intermittent fasting (IF) in the context of lifestyle disorders. The methodology is divided into two key parts:

Literature Review of *Ayurvedic* Texts – Focusing on the concepts of fasting, *Upavas*, *Agni* (digestive fire), *Ama* (toxins), and dosha balance from classical and research journal *Ayurvedic* sources.

Review of Contemporary Clinical Trials – Analyzing scientific literature on the effects of intermittent fasting on lifestyle diseases.

Data Collection

1. Classical *Ayurvedic* Sources

- **Primary Texts:** *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Sharangdhar Samhita*, *Bhavprakash Nighantu* and *Madhav Nidan* were the primary sources consulted for understanding the *Ayurvedic* perspective on fasting (*Upavasa*) and lifestyle disorders. Relevant chapters on *Dinacharya* (daily routine), *Ritucharya* (seasonal routine), and *Chikitsa* (treatment) were analyzed for references

to therapeutic fasting.

- **Traditional Commentaries:** Secondary literature and commentaries by prominent scholars like Vagbhata, Madhava and Bhavamisra were used to gain a deeper understanding of how fasting is described and recommended for various health conditions.
- **Research articles-** Research articles of ayurvedic research journals like *IJAM*, *J-AIM*, *CellMed*, *IJFMR AyuCaRe* were sourced to understand the recent researches in field of ayurveda.

2. Contemporary Scientific Literature on Intermittent Fasting

- **Database Search:** Peer-reviewed clinical trials, meta-analyses, and systematic reviews on intermittent fasting were sourced from medical databases such as Pub Med, Google Scholar, and Science Direct. Studies published between 2010 and 2023 were included to ensure the most recent scientific evidence.

Data Analysis

The data analysis process was carried out in two stages:

1. **Ayurvedic Analysis:** The Ayurvedic texts were examined qualitatively, focusing on the principles related to fasting, the concept of Agni (digestive fire), and how it affects lifestyle disorders. A thematic analysis was conducted to identify common principles of fasting in Ayurvedic practice that corresponded with modern fasting protocols.
2. **Scientific Review:** A comparative analysis of clinical studies was performed to assess the health outcomes of intermittent fasting. Studies were analyzed based

on their methodology (e.g., trial design, sample size, duration), metabolic outcomes (e.g., insulin resistance, blood pressure regulation, lipid levels), and relevance to the Ayurvedic framework. The focus was on identifying common metabolic effects observed in both Ayurvedic fasting principles and modern intermittent fasting protocols.

3. **Synthesis of Findings:** The results from both the Ayurvedic and scientific reviews were synthesized to determine the synergistic effects of intermittent fasting and Ayurvedic fasting practices. Common patterns were identified, and insights into the integrative benefits were drawn, particularly in terms of metabolic regulation, detoxification, and improving the balance of doshas (*Vata*, *Pitta*, and *Kapha*).

RESULTS

Literature Overview

Various scientific publications related to Meta-analyses, Randomized controlled trials (RCTs), Multiple pre-clinical studies, and Classical Ayurvedic texts were reviewed. Evidence was synthesized across modern clinical research and traditional paradigms.

1. Metabolic Effects of Intermittent Fasting (IF)

- **Weight loss & BMI:** studies showed an average reduction in weight and BMI in individuals with metabolic syndrome.^{7,8}
- **Lipids & Blood Pressure:** LDL was reduced, systolic BP reduced with nominal changes in HDL⁹.
- **Glycemic Control:** Glucose levels remained largely unchanged in meta-analyses, though large RCTs reported decreased HbA1c and fasting glucose.¹⁰

- **Gut microbiota & inflammation:** Modified IF over 8 weeks decreased fat mass, oxidative stress, and improved gut SCFA production.¹¹

2. Ayurvedic Foundations of Fasting

- *Charaka Samhita* highlights fasting (*Upavāsa*) and lightening therapies (*Langhana*) to pacify *Kapha* and remove *Ama*, essential in managing metabolic disturbances.¹²
- Ayurvedic frameworks emphasize fasting not just calorically, but as a digestive reset, aligning with modern concepts of autophagy and circadian harmony.^{13,14}

Research Gaps & Limitations

- Lack of large-scale clinical trials combining IF and Ayurveda.
- Meta-analyses show improvements mainly in weight/BMI/LDL/BP; glycemic outcomes inconsistent.
- Ayurvedic fasting protocols lack standardized outcome measures and dosing.
- The only human integration studies are small-scale or case-based, limiting generalizability.

DISCUSSION

This review explored the collective impact of intermittent fasting (IF) and Ayurvedic principles (*Upavāsa*, *Langhana*, *Dinacharya/Prakriti* -based routines) on lifestyle disorders such as obesity, metabolic syndrome, and type 2 diabetes.

1. Complementary Mechanisms: Modern and Traditional Perspectives

Meta-analyses show that IF leads to significant reductions in weight, BMI, LDL

cholesterol, and systolic blood pressure, over periods of 8–12 weeks. The effects on HDL and glucose levels are mixed, suggesting heterogeneous glycemic outcomes. These metabolic improvements are likely achieved through enhanced insulin sensitivity, increased autophagy, circadian alignment, and reduced systemic inflammation.¹⁰

Classical Ayurvedic scripts propose fasting (*Upavāsa*) and lightening therapy (*Langhana*) as beneficial for balancing *Kapha*, removing metabolic toxins (*Ama*), and restoring Agni (digestive fire). Treatment outcomes include improved lipid profiles, enhanced digestion, reduced oxidative stress, and long-term maintenance of metabolic wellness.¹⁵ When combined, IF may deliver biological benefits such as improved lipid metabolism and circadian realignment, while Ayurveda's individualized approach promotes digestive recalibration, dosha balance, and sustained adherence via personalized routines and herbal adjuncts.

2. Limitations and Research Needs

- **Lack of RCTs:** There are no large-scale, rigorously controlled clinical trials that directly compare IF alone, Ayurveda alone, and combined approaches.
- **Heterogeneity:** Variability in fasting protocols and herbal formulations makes data synthesis challenging.
- **Outcome Metrics:** Many Ayurvedic approaches lack standardized biomedical markers, and most evidence is anecdotal or based on case reports.
- **Long-Term Data:** Sustained efficacy and adherence to combined protocols beyond 12 weeks remain largely unexplored.

CONCLUSION

The combined application of intermittent

fasting and Ayurvedic principles offers a promising integrative approach to managing lifestyle disorders by targeting metabolic dysfunction, circadian misalignment, and systemic inflammation. While intermittent fasting enhances autophagy, insulin sensitivity, and lipid metabolism, Ayurvedic practices such as Upavāsa and Dinacharya support digestive regulation, detoxification, and doshic balance. Despite the conceptual synergy, robust clinical evidence remains limited, underscoring the need for well-designed, longitudinal studies to validate their combined therapeutic efficacy

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