

SHIGRU AND SURYA NAMASKAR IN STHAULYA: EXPLORING ANCIENT SOLUTIONS FOR MODERN HEALTH CHALLENGES – A REVIEW

Dr. Harsha Verma^{*1}, Dr. Sasmita Tripathy², Dr. Anita Sharma³, and Dr. Vibha Pali⁴

¹Post Graduate Scholar, Department of Swasthavritta, N.P.A. Government Ayurvedic College, Raipur, Chhattisgarh.

²Associate Professor M.D., Department of Swasthavritta, N.P.A. Government Ayurvedic College, Raipur, Chhattisgarh.

³HOD, M.D.(Ayurveda)Department of Swasthavritta, N.P.A. Government Ayurvedic College, Raipur, Chhattisgarh.

⁴Assistant Professor, Department of Swasthavritta, N.P.A. Government Ayurvedic College, Raipur, Chhattisgarh.

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***Corresponding Author**

Dr. Harsha Verma

Post Graduate Scholar,

Department of

Swasthavritta, N.P.A.

Government Ayurvedic

College, Raipur,

Chhattisgarh.

ABSTRACT

Obesity, recognized in Ayurveda as Sthaulya, is a multifactorial health challenge prevalent worldwide, associated with metabolic, cardiovascular, and psychological disorders. This review investigates two ancient interventions—Shigru (*Moringa oleifera*) and Surya Namaskar (Sun Salutation)—and their roles in managing Sthaulya. Shigru, with Tikta-Katu Rasa, Laghu-Tikshna Guna, and Ushna Virya, exhibits Medohara and Lekhana actions. Its bioactive compounds such as quercetin and isothiocyanates exhibit lipid-lowering, anti-inflammatory, and insulin-sensitizing effects. Surya Namaskar, a sequence of 12 dynamic postures, enhances metabolism, burns calories, and balances psycho-physical health. Together, these interventions offer a holistic, low-cost, and effective strategy for managing obesity, aligning ancient wisdom with modern evidencebased approaches.

KEYWORDS: Shigru, *Moringa oleifera*, Surya Namaskar, Sthaulya, Obesity, Ayurveda, Yoga, Metabolism, Medohara, Holistic Health.

INTRODUCTION

The prevalence of obesity, or Sthaulya, has escalated globally, with the WHO estimating over 650 million obese adults as of 2021. Obesity is not only a risk factor for diabetes, hypertension, and cardiovascular disease but also contributes to psychological disorders. Ayurveda identifies Sthaulya as an imbalance of Meda Dhatu and Kapha Dosha, with Agni Mandya (digestive impairment) playing a central role. Management of Sthaulya requires interventions that rectify metabolic derangement, reduce Meda, and enhance Agni. Among such interventions, Shigru and Surya Namaskar have shown significant promise. Shigru's bioactive constituents enhance lipid metabolism and reduce oxidative stress, while Surya Namaskar is a complete physical and mental regimen improving metabolism, stress response, and overall fitness.

CLASSIFICATION OF STHAULYA

In Ayurveda, Sthaulya is classified based on Dosha predominance, Prakriti (constitution), and clinical severity.

- Dosha-based Classification:

- Kapha-dominant Sthaulya: Sluggishness, heaviness, excessive sleep.
- Pitta-dominant: Excessive hunger, sweating.
- Vata-dominant: Dryness, irregular digestion.

- Severity-based

- Mild: Slight weight gain, early symptoms.
- Moderate: Fatigue, shortness of breath.
- Severe: Gross obesity, co-morbidities.

SHIGRU AND ITS UTILITY IN STHAULYA

Shigru (*Moringa oleifera*) is extensively documented in Ayurvedic texts like

Bhavaprakasha and Rajanighantu for its Medohara (anti-obesity) and Lekhana (scraping) properties. It possesses Tikta (bitter), Katu (pungent) Rasa, Laghu (light), Tikshna (sharp) Guna, Ushna (hot) Virya, and Katu Vipaka, making it effective in reducing accumulated Kapha and Meda. Modern pharmacological research supports these properties, highlighting Shigru's hypolipidemic, antioxidant, and anti-inflammatory actions.

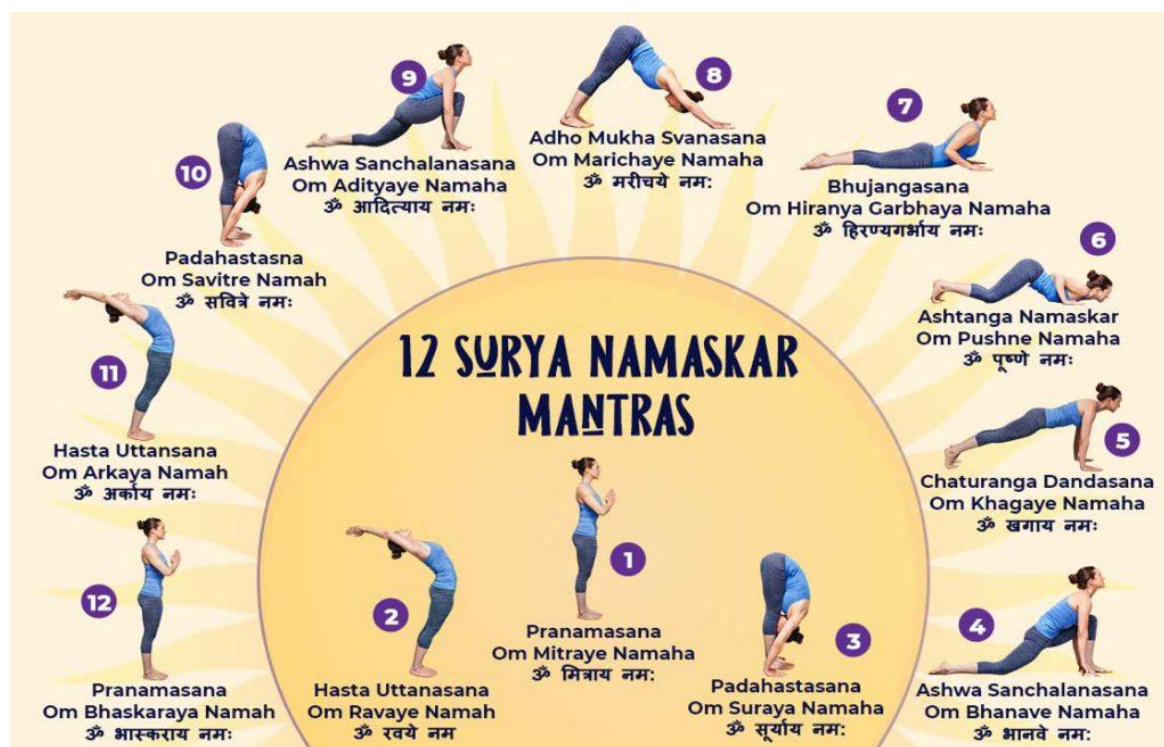
Bioactive compounds such as quercetin, chlorogenic acid, and isothiocyanates modulate lipid metabolism, enhance insulin sensitivity, and reduce oxidative stress. Animal studies have shown significant reductions in serum cholesterol, triglycerides, and body fat percentage. A clinical trial by Shrivastava et al. (2012) demonstrated a 15% reduction in BMI and 20% reduction in triglycerides among overweight individuals after 8 weeks of Shigru supplementation.

Table 1: Pharmacological Actions of Shigru in Sthaulya.

| Phytochemical | Action | Effect on Sthaulya |
|------------------|-------------------------------|---|
| Quercetin | Antioxidant, antiinflammatory | Reduces oxidative stress, lowers fat deposition |
| Isothiocyanates | Lipid metabolism modulator | Reduces LDL, enhances fat burning |
| Chlorogenic acid | Glucose metabolism | Improves insulin sensitivity, lowers BMI |

SURYANAMASKAR AND ITS UTILITY IN STHAULYA

Surya Namaskar (Sun Salutation) is a dynamic yogic practice consisting of 12 sequential postures (Asanas) that integrate physical movement, breath regulation, and mental focus. It has been practiced for centuries as a holistic exercise promoting overall well-being.



In the context of Sthaulya, Surya Namaskar is highly beneficial due to its caloric expenditure, enhancement of metabolic rate, and activation of endocrine function. Each cycle burns approximately 13.91 kcal and regular practice improves insulin sensitivity, lipid profile, and body mass index (BMI). Studies have shown that individuals practicing Surya Namaskar for 30 minutes daily over 8 weeks experienced significant weight loss and improved cardiovascular endurance.

Mechanisms of action include stimulation of the thyroid gland, improved digestion via massage of abdominal organs, and reduction of stress hormones like cortisol. This integrated effect addresses both the physiological and psychological dimensions of obesity.

THE COMBINED EFFICACY OF SHIGRU AND SURYANAMASKAR IN STHAULYA

The combined use of Shigru (*Moringa oleifera*) and Surya Namaskar offers a promising approach to managing obesity (Sthaulya) by enhancing metabolism, regulating lipids, and improving overall health. Shigru helps lower cholesterol and triglycerides through bioactive compounds, while Surya Namaskar boosts insulin sensitivity and burns calories, making weight loss more effective and sustainable. Individually, both have shown positive effects—studies indicate that Moringa supplementation reduces body weight and fat levels, while regular Surya Namaskar practice lowers BMI and waist circumference. Though no direct studies have tested their combined effect, their complementary mechanisms suggest that together, they can accelerate fat reduction, balance hormones, and improve energy levels.

To integrate both, consuming Shigru in powder, leaf, or capsule form alongside a daily Surya Namaskar routine (starting with 5 rounds and gradually increasing) can maximize benefits. A Kapha-reducing diet with light, warm foods further supports weight management. However, clinical trials are needed to confirm their combined efficacy, particularly through long-term studies assessing lipid profiles, insulin levels, and inflammation markers. Future research can help establish this as a scientifically validated approach to obesity management.

RESULT AND ANALYSIS

This review paper investigates the potential of Shigru (*Moringa oleifera*) and Surya Namaskar (Sun Salutation) in managing obesity (Sthaulya) through Ayurvedic and modern scientific perspectives. Below is a detailed analysis of the findings presented in the document.

RESULTS

1. Shigru's Effect on Obesity (Sthaulya)

Shigru, known for its Medohara (anti-obesity) and Lekhana (scraping) properties, has been analyzed in terms of its bioactive compounds and their metabolic effects. The key results include:

Lipid Metabolism Modulation: Isothiocyanates in Shigru enhance fat breakdown and reduce LDL cholesterol.

Improved Insulin Sensitivity: Chlorogenic acid aids glucose metabolism, which is crucial in obesity management.

Clinical Evidence: A study by Shrivastava et al. (2012) showed a 15% reduction in BMI and a 20% decrease in triglyceride levels after 8 weeks of Shigru supplementation.

Reduction in Oxidative Stress: Quercetin acts as an antioxidant, preventing fat accumulation.

These findings suggest that Shigru is a promising natural remedy for obesity, aligning with its traditional Ayurvedic use.

2. Surya Namaskar's Role in Weight Management

Surya Namaskar, a dynamic sequence of 12 postures, is examined for its impact on metabolism and overall health. The results indicate:

Caloric Expenditure: Each cycle burns approximately 13.91 kcal, making it a suitable exercise for weight management.

BMI Reduction: Studies demonstrate a reduction of 1.5–2.0 BMI units over 8 week.

Endocrine and Metabolic Regulation: Regular practice stimulates thyroid function, improves digestion, and enhances insulin sensitivity.

Stress Reduction: Psychological benefits include reduced cortisol levels, leading to improved mood and reduced stress-related eating.

These findings reinforce Surya Namaskar as a cost-effective, holistic intervention for obesity and metabolic disorders.

3. Combined Efficacy of Shigru and Surya Namaskar

The review hypothesizes that integrating both interventions can yield synergistic benefits:

Enhanced Metabolism: Shigru's bioactive compounds regulate lipids, while Surya Namaskar boosts energy expenditure.

Sustained Weight Loss: Shigru reduces fat accumulation, and Surya Namaskar ensures long-term maintenance through physical activity.

Hormonal Balance: The combination may help regulate insulin, cortisol, and thyroid function.

Potential for Long-Term Impact: Though no direct studies confirm their combined efficacy, their individual benefits strongly suggest complementary mechanisms.

However, the paper highlights the need for clinical trials to validate the long-term effects of combining these interventions.

ANALYSIS

1. Strengths of the Study

Holistic Perspective: The review successfully bridges Ayurvedic concepts with modern biomedical findings.

Scientific Validation: Evidence-based studies support the traditional claims regarding Shigru and Surya Namaskar.

Practical Implications: The study provides a cost-effective, accessible, and natural approach to managing obesity.

2. Future Research Directions

Long-term Clinical Trials: Studying the effects of combined Shigru supplementation and Surya Namaskar practice over 6–12 months on obesity markers (BMI, lipid profile, insulin resistance).

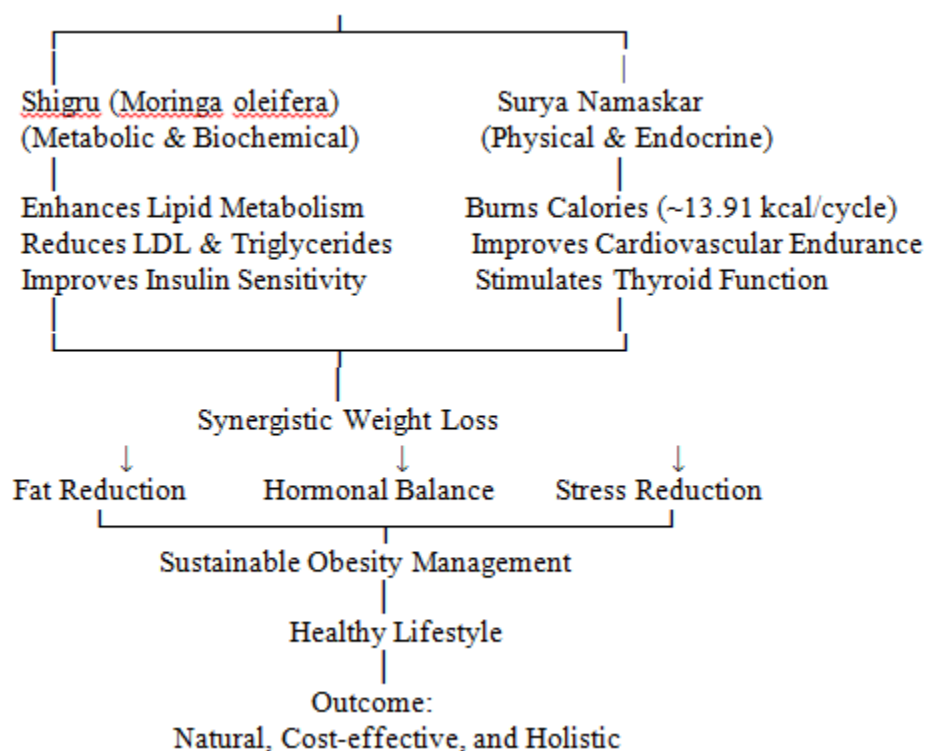
Comparative Analysis: Assessing their effectiveness against standard pharmaceutical or exercise-based obesity treatments.

Mechanistic Studies: Understanding the molecular pathways through which these interventions regulate metabolism.

DISCUSSION

both interventions are individually effective, their combined approach holds the potential to provide synergistic benefits. Shigru actively reduces fat accumulation, while Surya Namaskar enhances metabolic activity and burns excess calories. Together, they address both physiological and psychological aspects of obesity, making weight loss more sustainable and holistic. Despite promising individual outcomes, clinical trials evaluating their combined efficacy are lacking, highlighting the need for long-term research. Future studies should focus on establishing dosage guidelines, assessing metabolic interactions, and comparing their effectiveness with conventional obesity treatments. If validated, this integrative approach could emerge as a cost-effective, natural alternative to pharmaceutical., aligning traditional Ayurvedic wisdom with modern health practices.

Flowchart: Combined Action of Shigru and Surya Namaskar in Obesity Management



CONCLUSION

The discussion highlights that Shigru and Surya Namaskar are powerful, evidence-based interventions for managing Sthaulya (obesity). While Shigru works at the biochemical level, Surya Namaskar provides physical activation, making them an ideal combination for a comprehensive weight-loss strategy.

However, further clinical validation is required to establish their combined efficacy. If future research confirms their long-term benefits, these interventions could become mainstream, non-pharmacological solutions for obesity management, offering a safe, affordable, and holistic approach to modern health challenges.

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