

The Impact of Lifestyle Changes and Yoga in Preventing and Managing Madhumeha

Dr. Gurpreet Singh

M. D. Scholar, Department of Swasthavritta, Sri Ganganagar College of Ayurvedic Science and Hospital, Sri Ganganagar, Rajasthan
Corresponding Author Email: [id-singh.gurpreet199510\[at\]gmail.com](mailto:id-singh.gurpreet199510[at]gmail.com)

Abstract: *Ayurveda emphasizes the importance of preventive health rather than curative measures. Centuries ago, Ayurveda introduced the concepts of Dincharya (Daily Regimen), Ritucharya (Seasonal Regimen), and Sadvritta (Social Conduct), along with guidelines for a healthy lifestyle. However, in the current era, these practices are rarely followed, leading to a significant rise in lifestyle disorders, with diabetes being one of the most threatening. India is emerging as the diabetes capital of the world and it is the second most common cause of death in the country. Diabetes, a lifestyle disorder, cannot be managed solely by medical treatment. Lifestyle modification and yoga play a crucial role in its management. Lifestyle intervention and yoga can help manage weight, control blood glucose levels, and prevent both short - term and long - term complications of diabetes. Yoga, including asanas and pranayama, provides ideal care for the prevention and management of Madhumeha (Diabetes Mellitus), making it a revolutionary technique in combating this disease.*

Keywords: Madhumeha, diabetes, seasonal routines, Prameha, Yoga, pranayam

1. Introduction

The primary goal of Ayurveda is to maintain health and well - being through a holistic approach. According to Ayurveda, a healthy person is one who maintains a balance of both physical (Sharirika) and mental (Mansika) Doshas. To achieve a state of health, it is essential to maintain equilibrium in both the physical Doshas (Vata, Pitta, Kapha) and the mental Doshas (Satva, Raja, Tama), as emphasized by Sushruta.^[1]

The regulation of health is directly influenced by Dosha, Dhātu, Agni, and Mala, and indirectly by Ahara (diet) and Vihara (lifestyle). In the modern era, many diseases are emerging due to irregularities in diet and lifestyle, which can be compared to metabolic abnormalities. Therefore, it is crucial to revisit ancient medical systems to apply their measures in preventing the epidemic of lifestyle disorders, which can be prevented through changes in lifestyle and environment.^[2] Madhumeha (diabetes) is gaining global importance as a non - infectious epidemic/pandemic and is often called a 'Silent Killer.' Type 2 diabetes mellitus (DM) accounts for 95% of all diabetes cases. The World Health Organization (WHO) has projected that the global prevalence of Type 2 DM may more than double from 135 million in 1995 to 300 million by 2025.^[3] According to WHO, its percentage may rise to 40 - 45% by 2020. Therefore, it is essential to understand the severity of the disease and explore preventive measures. Substantial evidence suggests that diabetes is strongly associated with increasing urbanization, population growth, aging, unhealthy lifestyle choices, reduced physical activity, obesity, behavioral patterns, socioeconomic changes, and, most importantly, a Western - style diet.^[4]

Charaka, often referred to as the father of Indian medicine, defines Madhumeha as one of the eight major diseases (Ashta Mahagada) characterized by an excess of Kapha obstructing Vata.^[5] This imbalance can lead to various diseases, including diabetes mellitus (D. M.). According to Ayurvedic texts, disturbances in doshas cause 20 types of Prameha (diabetes).

^[6] Diabetes Mellitus is a chronic metabolic disorder resulting from insulin deficiency and resistance. Ayurveda prescribes various measures like daily and seasonal routines (Dincharya, Ratricharya, Ritucharya), control over natural urges (Adharaniya vega), ethical conduct (Sadvritta), and the use of natural herbs for disease management. These practices promote positive health care and disease prevention, urging the world to consider ancient medical systems.

Aims And Objectives

The primary aim is to evaluate the impact of Yoga and lifestyle guidelines on the prevention of Madhumeha (diabetes).

2. Material and Methods

The lifestyle intervention and Yoga schedule were developed based on Ayurvedic principles. The materials were gathered from Charak Samhita, Sushruta Samhita, and other publications.

Etiology^[7]

- Asayasukham: Habitual sitting on soft cushions for extended periods.
- Swapana - sukham: Prolonged sleeping, as described in Charak Chikitsa.
- Deewaswapan: Sleeping during the day.
- Avayayam: Lack of exercise.
- Aalsya: Laziness, as described in Sushruta Nidana Sthana.

Signs and Symptoms: ^[8]

- Polyuria: Excessive urination (Prabhuta Mutrata)
- Polydipsia: Excessive thirst (Trishnaadhikyata)
- Polyphagia: Excessive hunger (Kshudhaadhikyata)
- Weakness: General weakness (Daurbalya)
- Turbidity in urine: Cloudy urine (Avil Mutrata)
- Numbness: Numbness in hands and feet (Kara - pada daha suptata)

Classification:

- 1) Classification by Causes of Diabetes:
 - a) Sahaja Prameha: A genetically transmitted disorder.
 - b) Apathyannimitaja Prameha: Arises due to improper diet and lifestyle.
- 2) Classification by Body Type: ^[9]
 - a) Sthoola: Obese.
 - b) Krusha: Emaciated and weak.
- 3) Classification by Dosha Predominance:
 - a) Kaphaja Prameha: 10 types.
 - b) Pittaja Prameha: 6 types.
 - c) Vataja Prameha: 4 types, based on the characteristics and volume of Dhātu being excreted through urine.
- 4) Classification of Diabetes Mellitus: ^[10]
 - a) Type 1 Diabetes: Beta cell destruction, usually leading to absolute insulin deficiency.
 - b) Type 2 Diabetes: Characterized by varying degrees of insulin resistance, impaired insulin secretion, and increased glucose production.

Samprapti (Pathogenesis):

- **Due to Shuddha Vata:** When Vata Dosha is aggravated due to Vataakra Nidana, it leads to the depletion (Kshaya) of the other two Doshas and essential tissues (Sarabhoota Dhatus) like Vasa, Majja, Lasika, and Oja. This further aggravates Vata, which draws Oja towards the bladder (Basti), resulting in Madhumeha. This condition is difficult to treat (Asadhya) due to the initial involvement of Vata Dosha and the subsequent aggravation caused by Dhātu Kshaya. ^[11]
- **Dhātu Kshaya Janya Madhumeha Samprapti:** The depletion (Kshaya) of deep and essential tissues (Gambhira and Sarabhuta Dhatus) like Majja, Vasa, Oja, and Lasika leads to the aggravation of Vata Dosha. This vitiated Vata causes the excretion (Ksharana) of these essential tissues through urine (Mutra Pravriti) in such a quantity that it acts as an etiological factor for further Vata aggravation, creating a vicious cycle. Due to the rapid action (Ashukaritva) of Vata, all stages of Samprapti progress quickly, leading to an incurable (Asadhya) stage of the disease. ^[12]

Sadhya Asadhyata (Curability and Incurability): ^[13]

- Kaphaja Prameha: Ten types, which can be curable, maintainable, or incurable depending on the similarity of management.
- Pittaja Prameha: Six types, with curability, maintainability, or incurability based on the dissimilarity of management.
- Vatika Prameha: Four types, which can be curable, maintainable, or incurable depending on the severity of complications.

Some important lifestyle modification points

- Wake up early in the morning (Brahma Muhurta Jagrana).
- Engage in brisk walking (Chakramana).
- Perform light massage (Abyanga).
- Practice light exercise or yoga (Asana and Pranayam).
- Walk for 15 minutes after lunch.
- Walk slowly for 15 minutes after dinner.
- Sleep for only 6 - 7 hours during the night.
- Avoid sleeping during the day.

- Limit the intake of sweets, meat, chocolate, and dairy products.
- Avoid Urad dal, fried items, fast foods, pickles, and fermented items.
- Refrain from consuming cold drinks and alcoholic substances.

Yoga: Yoga serves as an effective lifestyle intervention that can aid in the regeneration of pancreatic beta cells, potentially enhancing the utilization and metabolism of glucose in peripheral tissues, the liver, and adipose tissue through enzymatic processes. Improved blood supply to the muscles and muscular relaxation, along with development, enhances insulin receptor expression, leading to increased glucose uptake and reduced blood sugar levels. ^[14]

Various types of Yoga Asanas performed as preventive therapy include:

- Suryanamaskar: Increases blood supply and improves insulin administration. ^[15]
- Mandukasan: Stimulates the pancreas to secrete insulin. ^[16]
- Dhanurasana: Improves the functioning of the pancreas and intestines. ^[17]
- Sarvangasana: Improves blood circulation. ^[18]
- Halasana: Stimulates the pancreas and activates the immune system. ^[19]
- Ardha Matsyendrasana: ^[20] Half spinal twist posture, highly beneficial for diabetes.

Pranayama reduces the overactivity of the central and autonomic nervous systems. Internal organs and endocrine glands are stretched and strengthened through Yogic Asanas, increasing blood and oxygen supply throughout the body, thus enhancing the efficiency and functioning of the affected parts and the endocrine system.

Effective Pranayama practices for diabetics include:

- Kapalbhāti
- Anulom Vilom
- Bhastrika
- Ujjayi Pranayama

These practices are believed to reduce stress hormones like adrenaline and cortisol, which in turn lower blood glucose levels. Ujjayi Pranayama also activates the thyroid gland, stimulating nerve impulses and pancreatic activity, which regulate the body's mechanisms and are beneficial in the treatment of Madhumeha. ^[21]

A study assessing the effect of Kapalbhāti, involving rapid performance of two selected yogic breathing techniques (Rechaka - exhalation and Puraka - inhalation), on heart rate variability in 12 male volunteers (aged 21 to 33 years) noted that Kapalbhāti modifies the autonomic status by increasing sympathetic activity and reducing vagal activity. ^[22]

3. Discussion

Ayurveda's holistic approach to health emphasizes preventive measures and lifestyle modifications. Despite the ancient guidance on Dinacharya, Ritucharya, and Sadvritta, modern lifestyles have strayed, resulting in a surge of lifestyle disorders, particularly diabetes. Integrating Ayurveda with modern medicine, focusing on dosha balance, dietary

regulations, herbal treatments, and yoga, presents a robust strategy for managing diabetes. The incorporation of yoga and lifestyle changes aids in weight management, blood glucose control, and overall well-being. This approach aligns with modern understandings of diabetes management, highlighting the importance of a balanced, active lifestyle and the potential of yoga to mitigate stress and enhance physical health.

4. Conclusion

The Ayurvedic approach to managing Madhumeha combines dietary and lifestyle modifications with herbal remedies and yoga, emphasizing dosha balance and tissue health. This holistic method not only addresses the symptoms but also targets the underlying causes, promoting long-term health and preventing complications. Early detection and intervention, coupled with stress management and mental well-being, are crucial. Integrating Ayurveda and yoga into diabetes care offers a complementary strategy to conventional treatments, supporting overall wellness and highlighting the need for further research to validate these practices globally.

References

- [1] Kaviraj Ambikadutt Shashtri, Sushruta samhita vol 1, chaukambha Sanskrit sansthana, Varanasi, reprint edition, 2006; pg no. - 64.
- [2] https://www.wisdomlib.org/uploads/journals/wjpr/volume-7,-february-special-issue-4_9121.pdf
- [3] <https://www.who.int/publications/i/item/9789241565257>
- [4] <https://www.who.int/publications/i/item/9789241565257>
- [5] Charak, CharakSamhita, Indriyasthan. Adhyaya9/8 9. In Acharya Dr. Gorakhanath Chaturvedi, editor. Reprint edition varanasi: Chaukhambha Sanskrita sansthana, 2011; 1004.
- [6] Sushruta, Sushruta Samhita, Nidanasthan. Adhyaya 6/6. In Acharya K Ambikadutta Shastri, editor. Reprint edition varanasi: Chaukhambha Sanskrita Sansthana, 2012.
- [7] Charka - Samhita Agnivesha; English translation; Sharma P. V. (Vol.1); Chaukhambha Orientalia Varanasi; Ninth edition 2005; Page. no.269.
- [8] Vidyotini hindi commentary by Pt. Kashinatha Sastri, Charaka samhita vol 1, chaukambha orientalia, Varanasi, reprint year, 2005; pg no.640.
- [9] Vidyotini hindi commentary by Pt. Kashinatha Sastri, Dr. gorakhnath Chaturvedi Charaka Chikitsa vol 2, chaukambha orientalia, Varanasi, reprint year, 2012; pg no 235.
- [10] Text book of Pathology by Harsh Mohan; Jaypee Brothers Medical Publishers (P) Ltd.; 6th edition 2010; page no.819.
- [11] Vidyotini Hindi commentary by Pt. Kashinatha Sastri, Charaka samhita vol 2, chaukhamba Sanskrit sansthan, Varanasi, reprint yr, 2011; pg no.228.
- [12] Vidyotini Hindi commentary by Pt. Kashinatha Sastri, Charaka samhita vol 2, chaukhamba Sanskrit sansthan, reprint yr, 2011; pg no.233.
- [13] MadhvaNidana Madhavkara; Madhuko shaby Srivijayarakshit and Srikanthadatta; Edition - reprint, 2005; Page no.119.
- [14] <https://onlinelibrary.wiley.com/doi/epdf/10.1155/2016/6979370>
- [15] Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017; 2 (11).
- [16] Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017; 2 (11).
- [17] Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017; 2 (11). Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017;
- [18] Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017; 2 (11).
- [19] Agarwal Vivek et. al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN - FEB 2017; 2 (11).
- [20] Sahay BK, Sahay Rk. Lifestyle modification in management of D. M Indian Med Association, 2002; 100: 17880 (Pub Med).
- [21] <https://www.breathewellbeing.in/blog/pranayama-for-diabetes/>
- [22] Sahay BK, Ramananda Yogi, Raju PS. Madhavi S, et al. The effect of yoga in diabetes in Diabetes Mellitus in developing countries Ed Bajaj JS (Interprint, New Delhi), 1984: 379 - 81.