

REVIEW ARTICLE

Impact of Mandukasana and Dhanurasana Practice during Brahmamuhurta on Diabetes Mellitus

Kripali P. Jangle^{1*}, Priya S. Meshram²

¹Assistant Professor, Department of Swasthavritta and Yoga, Jupiter Ayurved Medical College, Nagpur, Maharashtra, India.

²Assistant Professor, Department of Kriya Sharir, Jupiter Ayurved Medical College, Nagpur, Maharashtra, India.

ARTICLE INFO

Article history:

Received on: 19-07-2023

Accepted on: 20-08-2023

Available online: 30-09-2023

Key words:

Brahma muhurta,
Dhanurasana,
Diabetes,
Mandukasana

ABSTRACT

Introduction: Diabetes mellitus is a non-communicable disease spreading rapidly in the entire world due to disturbance in an individual's lifestyle. Ayurveda is a rational science of life as it has a great contribution in the prevention of diseases. In classical texts, *Dincharya upkram* had been described foremost to make people aware about health and personal hygiene. Waking up at *Brahma muhurta* and utilizing that time in yoga and meditation makes man healthy and free from diseases. Practicing yoga such as *Mandukasana* and *Dhanurasana* during *brahma muhurta* can help to achieve health and one can get rid of the metabolic disorder diabetes mellitus.

Aim: The aim of the study was to review the impact of *Mandukasana* and *Dhanurasana* practice during *Brahma muhurta* on diabetes mellitus.

Materials and Methods: Critical review from the Literature from Ayurvedic texts, Yoga texts, research articles related to the topic is referred.

Observation and Results: Review of literature and research articles on *Mandukasana* and *Dhanurasana* shows that regular practice of *Mandukasana* and *Dhanurasana* can reduce insulin resistance and increase insulin sensitivity. Thus, *asanas* such as *Mandukasana* and *Dhanurasana* maintain the function of pancreas and reduce the blood glucose level in diabetic patients.

Conclusion: Regularly practicing *Mandukasana* and *Dhanurasana* can improve the blood supply to the abdominal organs which includes pancreas too. This leads to getting rid of metabolic disorder and diabetes mellitus and improves the quality of life of an individual.

1. INTRODUCTION

Ayurveda being the Indian system of medicine describes to restore the health in healthy individual and treat the diseased one.^[1] In the classical text, *Dincharya upakram* (Daily regimen) is described foremost which emphasizes the importance of maintaining health by practicing the daily regimen. Charya (regimen) is performed to prolong the life span of an individual.^[2] As per *aacharya Vagbhata*, *Dincharya* starts with early wake-up from bed till one goes to bed in the night. Earlier

people followed *Dincharya upakram* for the purpose of *swastha Rakshan*. *Dincharya* begins with *Brahma muhurta utthanam*, *Danta dhavan*, *Nasya*, *Anjana*, *Abhyanga*, *Vyayama*, and *snanan*.^[3-5] In the present era due to adoption of altered life style, people become more prone to metabolic disorders such as obesity, diabetes mellitus, and hypertension. Among these metabolic disorders, diabetes mellitus is the most common disease affecting large populations in these decades. To prevent it potentially lifestyle management especially yoga, *Vyayama* plays an important role.^[6] Yoga is an ancient science. It is a way of life based on a certain view of life which aids in keeping oneself healthy.^[7] *Yogagasana* such as *Mandukasana* and *Dhanurasana* practice plays an important role in the proper functioning of pancreas. Hence, here is an attempt made to explore the significance of the practice of yoga during

Corresponding Author:

Dr. Kripali P. Jangle,
Department of Swasthavritta and Yoga, Jupiter Ayurved Medical College,
Nagpur, Maharashtra, India.
Email: kripali546@gmail.com

Brahma muhurta to prevent and control diabetes mellitus. The aim of paper is to review the impact of *Mandukasana* and *Dhanurasana* practice during *Brahmamuhurta* on diabetes mellitus.

2. METHODOLOGY

For this study, the essential and theoretical components have been collected from Ayurvedic samhitas, classical texts with their commentaries, various reference books, journals, modern texts, and online surfing to be reviewed.

2.1. Review of *Brahma Muhurta*

Brahma means knowledge which is gained by reading.^[8] *Muhurta* means time period of 48 min.^[9] The time which is ideal for gain of knowledge is *Brahma muhurta*. It is the last part of the night before sunrise. Usually, during this time, the environment is clean without many pollutants. Along with the clean air, pleasant atmosphere, and absence of noise, there is harmony in the surroundings. *Brahma muhurta* is a time when one can establish a firm inner connection with the omni present divine *parmatama*. It is considered as the best time for dhyana, yoga, knowledge, and initiation of any vital efforts.

Acharya Charaka explained that it is important for scholars to get up early in morning for veda and Samhita adhyayana.^[10] Vagbhata enlightened that awakening early in morning helps for preserving the health and longevity of life.^[11] According to Vriddha Vagbhata after awakening early in morning, one should assure proper digestion of food taken during last night.^[1,12]

Time of *Brahma muhurta* is an intermittent duration between respiration and photosynthesis in plant kingdom. At the time of brahma muhurta, nascent oxygen is in abundance which mixes with hemoglobin forming oxyhemoglobin reaching to the remote tissues and boosts the immune system. Melatonin secretion in the body is optimum during the brahma muhurta period.

2.2. Diabetes Mellitus

Diabetes is a metabolic disorder characterized by chronic feature of hyperglycemia with disturbance of carbohydrate, fat, and protein metabolism. They are classified into two types:

1. Type-I (insulin dependent)
2. Type-II (Non-insulin dependent)

The condition hyperglycemia may result due to following factors,

1. Reduced insulin secretion
2. Decreased glucose utilization by the body
3. Increased glucose production.

DM is considered a metabolic disorder. The major cause of DM is dysfunction of the pancreas which is the greatest risk factor and causes other metabolic disorders such as obesity, hypertension, and cardiovascular disease.^[13]

In classical texts, *Nidanas* mentioned by Sushruta are day sleep, lack of exercise, sitting idle, cold, unctuous items, sweet, and fatty, liquid food and drinks in excess gradually lead to occurrence of diabetes.^[14] According to Vagbhata, *Prameha Hetus* is that whatever food and regimen promotive of *kapha*, *medas*, *mutra* causes *prameha*.^[15]

2.3. Perspective of Yoga in DM

Yoga is methodized effort self-perfection. *Astanga yoga*, that is, *Yam*, *Niyam*, *Asana*, *Pranayama*, *Pratyahara*, *Dharna*, *Dhyana*, and *Samadhi*

leads man to the supreme salvation. Among these eight, asanas are the best-known part of yoga. Asana means posture. There are main 84 asanas which provide physical relaxation, exercise, and mental peace. *Yogasanas* help in supplying the rich blood supply and oxygen in the targeted organs. Practice of asanas such as *Mandukasana* and *Dhanurasana* maintains the function of pancreas and reduces the blood glucose level in diabetic patients.

Mandukasana and its benefits: *Mandukasana* is a Sanskrit word where *Manduk* means frog and at the final stage of this asana you attain a pose that makes you like a frog. This asana is great for the abdominal organs and its highly recommended for someone who wants to reduce belly fat.

2.3.1. Prevent diabetes

Practicing this asana daily and regularly helps to prevent chronic incurable diseases like diabetes. Many studies have proven that the frog pose improves insulin production in the body. Researchers also recommended the pose for those who are already suffering from the issues as it helps to control diabetes.

2.3.2. Improve digestive system

While doing this asana, the pressure builds up in the abdominal region that massages the internal organs hence improves digestive health. As per many studies, with the regular practice, the asana aids digestive health and enhances the functioning of it which improves bowel movement promotes digestive juices and enzymes (good for metabolism), releases trapped gases, and prevent constipation and other digestive issues.

Dhanurasana and its benefits: The *dhanurasana* is one of the basic poses mentioned in *Hata Yoga*. It is a Sanskrit word that means "bow pose" in English. Dhanur is the Sanskrit word for bow. The benefits of *Dhanurasana* are:

- Stretches the abdominal muscles and improves the digestion process.
- Improves the strength in your ankles, thighs, chest, neck, and shoulder.
- Helps to tone abdominal region.
- Tones back and improves spinal flexibility.
- Helps to open chest region and facilitate breathing.

3. DISCUSSION

Diabetes is a chronic metabolic disease. The main objective of this study was to determine the impact of *yogasana* in control of diabetes mellitus. The concept of Brahma muhurta, Yoga, and diabetes is the most vital factors to be paid concentration. Awakening at Brahma muhurta, yoga comprises of *Jeeva amruta*, that is, nascent oxygen which nourishes and rejuvenates each cell of body. Due to the disturbed lifestyle, people are commonly suffering from metabolic disorders. Diabetes mellitus is an endocrinal and metabolic disorder which can be preventable by practicing yoga. Asanas play an important role in maintaining body function properly by improvising the blood supply to the targeted body organs. Specific Asanas influence abdominal organs. Asanas such as *Dhanurasana* and *mandukasana* have an effect on abdominal muscles as abdominal organs. Regularly practicing of these asanas can improve the blood supply to the abdominal organs which includes pancreas also. There are many references in ayurvedic texts and websites about *mandukasana* and *dhanurasana* on abdominal organs. *Yogasana* has given hope to diabetic patients to remain free from medication.

A study involving diabetic individuals showed that doing *Dhanurana* for 3–7 min. It may help to manage blood sugar levels. The study results showed reduced insulin resistance and increased insulin sensitivity. It directly affects glucose levels and also increases insulin secretion. It was also observed that performing *Dhanurasana* helps to reduce body mass index and waist fats. As *Dhanurasana* stimulates the liver and pancreas, it is beneficial for the management of diabetes. Hence, performing *Dhanurasana* while using conventional medicine may provide better regulation in diabetic patient.^[16] The proof for the effect of *Dhanurasana* on diabetic patients which supports the texts is as follows:

1. Diabetic patients – Fasting blood glucose before *Dhanurasana* – 188.7 mg/dL and after *Dhanurasana* practice – 120.8 mg/dL.
2. Postprandial blood sugar level before *Dhanurasana* – 322 mg/dL and after *Dhanurasana* practice – 194.8 mg/dL.^[17]

The effect of *Mandukasana* on diabetic patients is as follows:

1. Diabetic patients fasting blood sugar before practicing *mandukasana* with medicine is – 140 mg/dL \pm 40.25 S.D. and after practicing *mandukasana* with medicine after 40 days is – 98.5 mg/dL \pm 8.50 S.D.
2. Postprandial blood sugar before *mandukasana* with medicine is – 220.5 mg/dL \pm 72.50 S.D and after practicing *mandukasana* with medicine is – 145.5 mg/dL \pm 32.50 S.D.^[18]

4. CONCLUSION

Brahma muhurta is an appropriate time for performing meditation, yoga, *Adhyayan*, and *vyayam* as it gives fruitful results. Performing yoga, particularly *Mandukasana* and *Dhanurasana* on *Brahma muhurata*, helps in preventing and controlling diabetes mellitus. These asanas stimulate the abdominal organs which include pancreas by providing a proper blood supply which helps for the proper functioning of pancreas to synthesis insulin which promotes the proper metabolism of carbohydrates. Practicing yogasanas such as *Dhanurasana* and *Mandukasana* is the best tool to lead a healthy life.

5. ACKNOWLEDGMENTS

Nil.

6. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in design and execution of the article.

7. FUNDING

Nil.

8. ETHICAL APPROVALS

This study not required ethical clearance as it is a review study.

9. CONFLICTS OF INTEREST

Nil.

10. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

11. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliation.

REFERENCES

1. Acharya YT. Charaka, Charak Samhita with Ayurveda Dipika Commentary of Chakrapani Datta. Varanasi: Chaukhamba Orientalia; 2011. p. 187.
2. Tewari PV. Vagbhata, Astanga Hridayam with Sarvanga Sunder Commentary Sutrasthana. 2nd ed., Ch. 2. Verse 1. Varanasi: Chaukhamba Orientalia; 2002. p. 16.
3. Tewari PV. Vagbhata, Astanga Hridayam with Sarvanga Sunder Commentary by Arunadatta. 10th ed. Varanasi: Chaukhamba Orientalia; 2011. p. 24.
4. Tewari PV. Vagbhata, Astanga Hridayam with Sarvanga Sunder Commentary by Arunadatta. 10th ed. Varanasi: Chaukhamba Orientalia; 2011. p. 25.
5. Tewari PV. Vagbhata, Astanga Hridayam with Sarvanga Sunder Commentary by Arunadatta. 10th ed. Varanasi: Chaukhamba Orientalia; 2011. p. 26.
6. Tewari PV. Vagbhata, Astanga hridayam with Sarvanga Sunder Commentary by Arunadatta. 10th ed. Varanasi: Chaukhamba Orientalia; 2011. p. 27.
7. Bijlani RL. Understanding Medical Physiology. 4th ed. New Delhi: Jaypee Brothers Medical Publication; 2011. p. 751.
8. Tewari PV. In: Upadhyaya VY, editor. Vagbhata, Astangahridayam with Vidyotini Hindi Commentary by Kaviraj Atridev Gupta. Verse 2/1. Varanasi: Chaukhamba Orientalia; 2011.
9. Available from: <https://en.wikipedia.org/wiki/brahmamuhurta> [Last assessed on 2023 May 05].
10. Acharya YT. Agnivesha, Charak, Dridhabala, Charak Samhita. 2nd ed. Vimansthana 8/7. Varanasi: Chaukhamba Orientalia; 1990.
11. Gupta A. In: Upadhyaya VY, editor. Vagbhata, Astangahridayam with Vidyotini Hindi Commentary by Kaviraj Atridev Gupta. Varanasi: Chaukhamba Orientalia; 2011.
12. Changani SG. Astangasangraha edited with Arthaprakashika. Verse 3/3. Varanasi: Chaukhamba Sanskrit Sansthan; 2005.
13. Mohan H. Text Book of Pathology. 6th ed. New Delhi: Jaypee Publishers; 2010. p. 818.
14. Acharya YT. Susruta, Susruta Samhita with Nibhandhasangraha Commentary of Dalhana. Varanasi: Chaukhamba Orientalia; 2009. p. 289.
15. Tiwari PV. Vagbhata, Astanga Hridayam with Sarvanga Sunder Commentary by Arunadatta. 10th ed. Varanasi: Chaukhamba Orientalia; 2011. p. 502.
16. Malhotra V, Singh S. The beneficial effect of yoga in Diabetes. Nepal Med Coll J 2005;7:145-7.
17. Uma YM, Pratibha K, Chiplunkar S. A review on impact of brahma muhurta on attitude of yoga in the lifestyle disorders-Diabetes mellitus. Int J Yoga Allied Sci 2013;2:152-5.
18. Menaria R, Singh H, Tank P, Menaria J. Prophylactic role of Mandukasana and OM chanting on Patients who survives with diabetes. J Drug Deliv Ther 2021;11:5-7.

How to cite this article:

Jangle KP, Meshram PS. Impact of Mandukasana and Dhanurasana Practice during Brahmamuhurta on Diabetes Mellitus. IRJAY. [online] 2023;6(9):42-44. Available from: <https://irjay.com>
DOI link- 10.47223/IRJAY.2023.6908