

## YOGA –A POTENTIAL SOLUTION FOR DIABETES MELLITUS

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### ABSTRACT

India accounts for approximately 70 million diabetic patients and the number is expected to increase up to 90 million by 2030. Diabetes represents a cluster of metabolic diseases characterized by high blood glucose level. Many comparisons suggest that there are some similarities between Madhumeha and Diabetes Mellitus as far as Etiological factors, clinical presentation and to some extent therapeutic aspects are concerned. But Ayurvedic view on the pathogenesis is entirely different from that of western view. Various lifestyle modifications described in ayurvedic texts are considered to be the first line of treatment for Madhumeha (Diabetes) prior to pharmacological intervention. Ayurveda also inculcates certain principles of yoga along with oral treatment. The modern form of yoga primarily focuses on physical exercise (asanas), pranayam. It has been considered as a simple and potentially economical therapy used for prevention and cure of diabetes along with medical treatment.

**Keywords:** Diabetes, Yoga, Metabolic disorder, Madhumeha

### INTRODUCTION

Diabetes Mellitus is deficiency or dysfunctioning of Insulin production. It is one of the major metabolic disorders which are now-a-days becoming world's fastest growing disease. According to WHO between 1995 to 2025 diabetic patients in India will increase by 195%. Diabetes Mellitus type II has high prevalence rate affecting more than 311 million people globally.

The word Diabetes means 'siphon through' and mellitus means 'sweetened with honey'.

### AIM AND OBJECTIVES

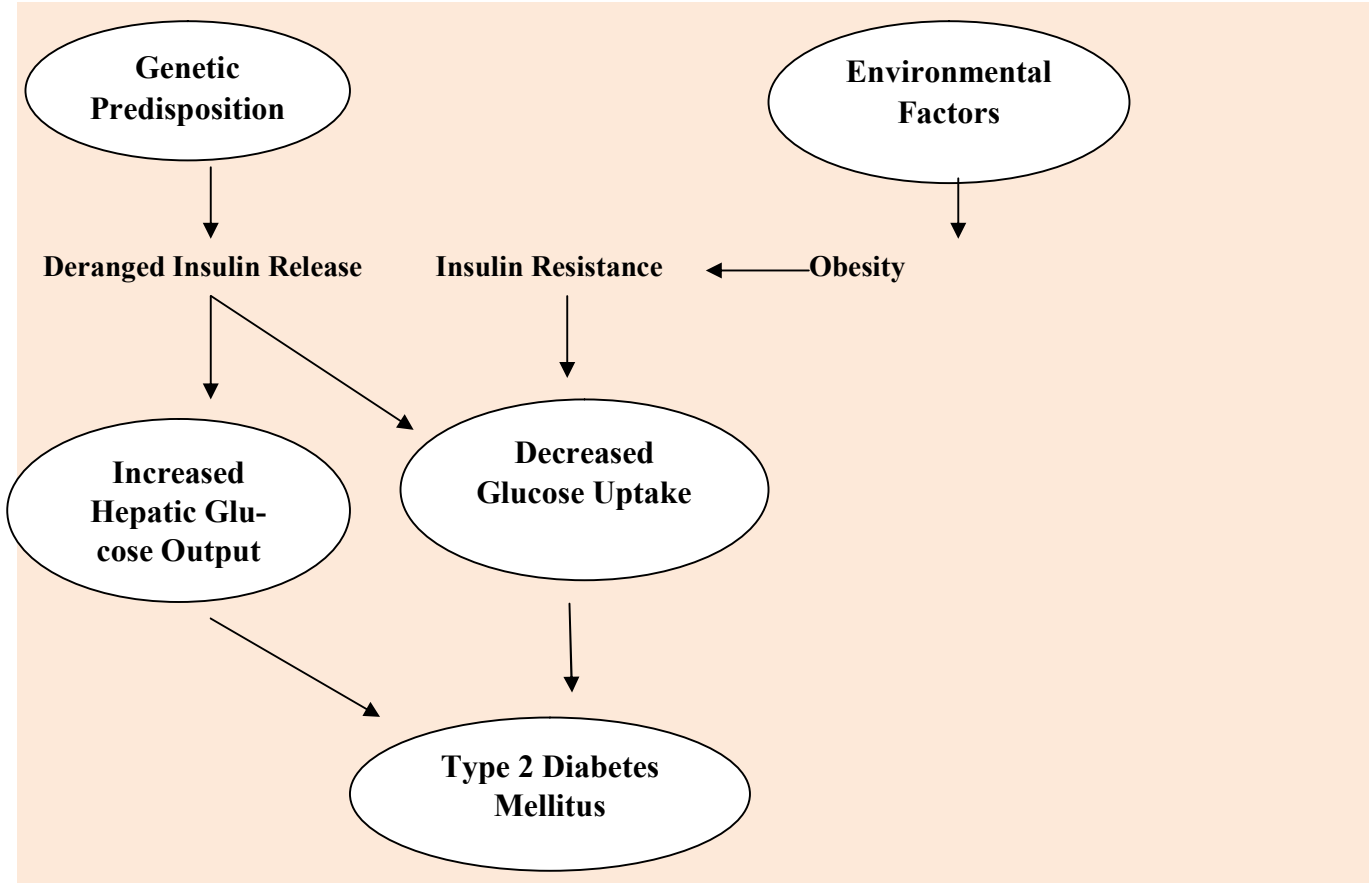
- To introduce and explain Yoga as a potential tool for prevention and cure of Diabetes Mellitus (Madhumeha).
- To find the probable mode of action of Yoga on Diabetes Mellitus.
- To establish a relationship between Diabetes Mellitus and Madhumeha.

**DEFINITION AND DESCRIPTION**

It is described as a metabolic disorder with multiple causative factors and is characterized by hyperglycemia. Damage, dysfunction and failure of various

organs especially the eyes, heart, kidneys, nerves, and blood vessels are the major complications of diabetes mellitus<sup>1</sup>.

**BASIC PATHOLOGY OF DIABETES MELLITUS TYPE II<sup>2</sup>**



**COMPARISON OF PRAMEHA & DIABETES MELLITUS**

A lot of research work has been carried out in the field of Diabetes Mellitus and Prameha, particularly Madhumeha. Madhumeha has been found to be in close resemblance with Type 2 Diabetes Mellitus. Madhu means honey and Meha means excessive

flow of urine. Passage of turbid and sweet urine in excessive amount is the main characteristic features of Madhumeha.

Prameha can be compared to Diabetes Mellitus and its three types: *Kaphaj*, *Pittaj* and *Vataj prameha* can be correlated with different stages of Diabetes Mellitus<sup>3</sup>.

<i>Kaphaja Prameha</i>	Malfunctioning of pancreas (Results in improper insulin secretion and resistance).
<i>Pittaj Prameha</i>	Over functioning of Adrenal, Thyroid, Glucagon & Cortisol.
<i>Vataj Prameha</i>	Insulin deficiency due to autoimmune or idiopathic of Beta-cell of islet of langerhans of pancreas.

## INTRODUCTION OF YOGA AS A TOOL FOR COMPLIMENTARY & ALTERNATIVE MANAGEMENT OF DIABETES MELLITUS

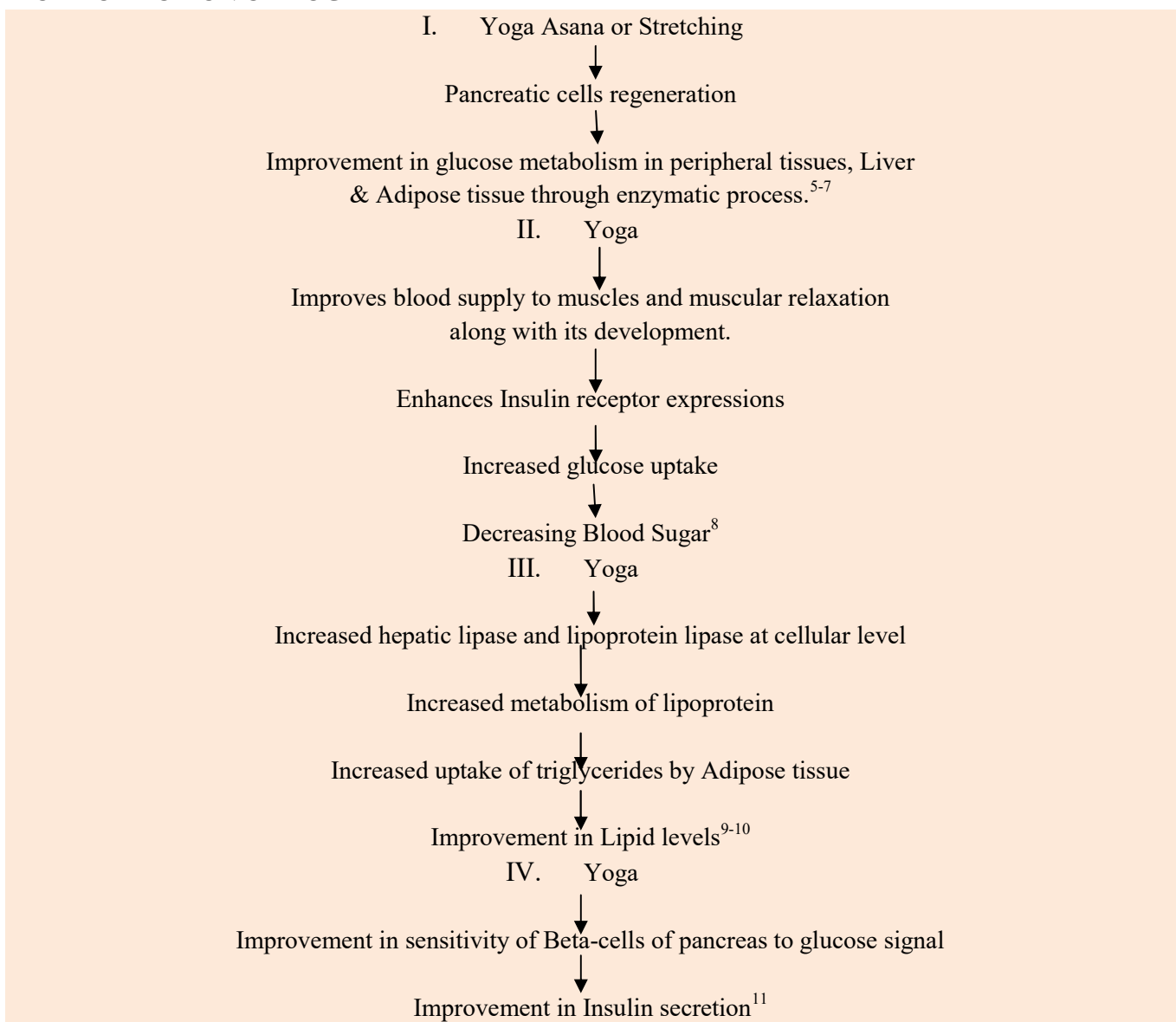
Yoga is derived from word "Yuj" which means "to join or unite" i.e. integration of Body, Mind & Soul. The main aim of yoga is to balance the physical, mental, emotional and spiritual extent of individual<sup>4</sup>. According to Maharishi Patanjali: "*Yoga chitta vritti nirodha*"

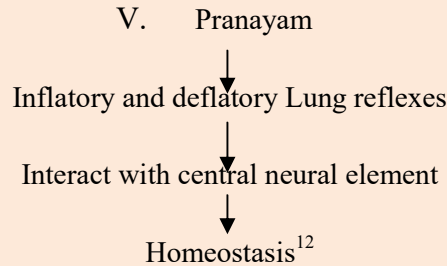
(Yoga is restraint of the activities of the mind)

*Chitta = Mana + Buddhi + Ahankar*

Since Diabetes Mellitus is on rise now-a-days people are intrested in alternative therapies rather than just taking oral medications which cause many side effects. Yoga is considered as an economical and potentially active alternative for the prevention and cure of metabolic disorders like Diabetes. Many studies have been done to evaluate the management of diabetes through yoga and it has shown positive benefits with good impact on hyperglycemia, dyslipidemia and cardiovascular status.

## MODE OF ACTION OF YOGA





### YOGA ASANAS & PRANAYAM PRESCRIBED FOR DIABETES MELLITUS PATIENTS<sup>13</sup>

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| <ul style="list-style-type: none"> <li>➤ Bhastrika Pranayama</li> <li>➤ Suryanamskar</li> <li>➤ Kapal- Bhati</li> <li>➤ Tadasana (Mountain pose)</li> <li>➤ Trikonasana (Triangle pose)</li> <li>➤ Anulom Viloma (breathing exercise)</li> <li>➤ Bhramari(breathing exercise)</li> <li>➤ Paschimottanasan (seated forward bend)</li> </ul> | <ul style="list-style-type: none"> <li>➤ Bhujangasana (cobra pose)</li> <li>➤ Shavasana (corpse pose)</li> <li>➤ Vajrasana (thunderbolt pose)</li> <li>➤ Pawanmuktasana (wind relieving pose)</li> <li>➤ Padmasana ( lotus position)</li> <li>➤ Sarvangasana (supported shoulder stand pose)</li> <li>➤ Matsyasana (fish pose)</li> <li>➤ Sukhasana (crossed leg pleasant pose)</li> </ul> |
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### DISCUSSION

The incidence of Diabetes Mellitus is increasing with age, physical inactivity and sedentary lifestyle. Chronic hyperglycemia is major cause for complications like Nephropathy, Neuropathy and Retinopathy. Various drugs have been used for controlling blood glucose level but such drugs have drawbacks and adverse effects if used for long time. Complementary and alternative therapy is on rise now-a-days with increasing use of yoga as an alternative therapy for preventing and managing Diabetes Mellitus. Yoga improves the glucose metabolism in peripheral tissues and sensitivity of Beta-cells of pancreas to glucose signal. It also acts on the basic cause of various metabolic disorders i.e. physical inactivity along with sedentary lifestyle. It also helps in managing the stress factor which is known to be one of the causes of Diabetes Mellitus.

### CONCLUSION

Yoga is economically promising for treatment and prevention of diabetes. It has a positive effect on blood glucose control. Pranayam (Controlled breathing techniques), Yoga asanas (Physical exercises and

Body postures) can help prevent and treat the disease by:

- Rejuvenating pancreatic cells
- Exercising the muscles
- Promotes weight loss
- Improving mental status (For stress related hyperglycemia)

Yoga has time and again proven to be complementary and alternative treatment for various chronic disorders like Diabetes Mellitus. It has a lot of potential which can enhance the quality of life of diabetic patient along with its medical treatment. Yoga improves various biochemical components in the body and enhances the endocrine functions of body along with stress reduction which enables diabetic patient to live a healthy stress free life.

### REFERENCES

1. Diagnosis and Classification of Diabetes Mellitus. American Diabetes Association, Diabetes Care 2004 Jan; 27(suppl 1): s5-s10. <https://doi.org/10.2337/diacare.27.2007.S5>
2. Mohan Harsh. Textbook of Pathology. J.P. Brothar's Medical Publication Private Limited. 5th edition.
3. Bishnu Choudhury/Int. J. Res. Ayurveda Pharm. 7(1), Jan-Feb 2016

4. HH Sri Sri Ravi Shankar (2011) Patanjali Yog Sutras-A commentary (1st edtn), India: Sri Sri Publication Trust.
5. Balaji PA, Varne SR, Ali SS (2012) Physiological effects of yogic practices and transcendental meditation in health and disease. *N Am J Med Sci* 4: 442-448.
6. Dang KK, Sahay BK (1999) Yoga and Meditation, Medicine update. In: Singh MM, editor. *The Association of Physicians of India*. Vol. 9. New Delhi: APICON, The Association of Physicians of India conference 502-512.
7. Sahay BK, Murthy KJR (1988) Long term follow up studies on effect of yoga in diabetes. *Diab Res Clin Pract* 5: S655.
8. Chandratreya S (2012) Diabetes and Yoga.
9. Delmonte MM (1985) Biochemical indices associated with meditation practice: a literature review. *Neurosci Biobehav Rev* 9: 557-561.
10. Tulpule TH, Shah HM, Shah SJ, Haveliwala HK (1971) Yogic exercises in the management of ischaemic heart disease. *Indian Heart J* 23: 259-264.
11. Manjunatha S, Vempati RP, Ghosh D, Bijlani RL (2005) An investigation into the acute and long-term effects of selected yogic postures on fasting and post-prandial glycemia and insulinemia in healthy young subjects. *Indian J Physiol Pharmacol* 49: 319-324.
12. Jerath RJ, Edry VA, Barnes VA, Jerath V (2006) Physiology of long pranayamic breathing: Neural respiratory elements may provide a mechanism that explains how slow breathing shifts the autonomic nervous system. *Med Hypotheses* 67:566-71.
13. Thangasami et al., *J Diabetes Metab* 2015, 6:10 <http://dx.doi.org/10.4172/21556156.1000613>

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