

***Yogasana* in management of diabetes mellitus-2- A Critical Review**

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Abstract:

Background: -*Yoga* is group of physical, mental and spiritual practices or discipline which originated in ancient India. In today's world, lifestyle has been changed, lack of regular exercise, eating of junk food or fast food, etc. give rise to many lifestyle disorders. Diabetes mellitus 2 is one of them. In diabetes mellitus 2 cells of pancreas doesn't make enough insulin or cell can't use the insulin. Hence with the help of *asanas* management of Diabetes Mellitus2 can be effectively helpful.

Objectives:-Objective is to study the *Yogasana* in management of DM2.

Methods: -Literature review, databases, Ayurvedic and *Yoga* classical texts were reviewed with focus to assess relation between *Yogasana* and Diabetes Mellitus2.

Results: -Studies state that *Yogasana* help to decrease blood glucose level and increase utilization and metabolism of glucose in peripheral tissues by

regeneration/rejuvenation of cells of pancreas.

Conclusion: So by this study it can be concluded that we can use *Yogasana* in day to day practice as effective management in DM2.

Keywords: -*Yoga*, Diabetes Mellitus-2, *Asana*

INTRODUCTION:

Diabetes mellitus is a metabolic disorder characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both. It may be accompanied by other biochemical disturbance and the presence of progressive diabetic tissue damage with micro and macrovascular complications. The prevalence of type 2 diabetes is increasing all over the world. The WHO estimated that there were 31.7 million persons with diabetes in India in 2000 and that this number is likely to be 71.4 million in 2030. ^[1]

With the rising number of people being diagnosed with DM, it is no wonder scientists are looking for newer methods to treat the disease, one of the corner stones of controlling one's blood sugar is regular and holistic exercise. And *yoga* is one such levels. This paper aims to highlight the *yogasana* for its practical applicability in the management of DM 2.

MATERIALS AND METHODS:

- Literature has been reviewed from *yoga* books.
- Related websites, research papers, articles have been searched.

LITERATURE REVIEW:

Diabetes mellitus 2 has two physiological defects.

- 1) Insulin resistance (reduced action of insulin in target tissues, muscles and fat).
- 2) Abnormal insulin secretion.

Environment factors like physical inactivity, degree of obesity, generous dietary intake the occurrence of type 2 DM.^[9]

Yoga:

The word *yoga* is derived from the sanskrit root *yuj* meaning to bind, join, attach and yoke, to direct and concentrate one's attention on, to use and apply. It also means union or communion.^[2] *Yoga* for a common person contains the practices of *yama*, *niyama*, *asana*, *pranayama*, *pratyahara*, *kriya* and meditation, which are helpful to keep oneself physically fit, mentally alert and emotionally balanced. *Yoga* is one of the most powerful drugless

system of treatment. It is having its own concept of wellness which has been scientifically understood and presented by many.^[3]

Asana in DM2:

Asana means sitting in a particular posture, which is comfortable and which could be maintained steadily for long time. *Asana* gives stability and comfort, both at physical and mental level. *Surya namaskar*, *Trikonasana*, *Pavanmuktasana*, *Bhujangasana*, *Matsyasana*, *Vakrasana*, *Ardha Matsyendrasana*, *Halasana*, *Dhanurasana*, *Mandukasana*.^[4,8] There are many *asana* but these *asana* are the best for DM2 to control blood sugar levels are explain below.^[8]

- 1) *Surya Namaskar*:- It enhances the utilization of insulin and increase the blood circulation to pancreas.
- 2) *Trikonasana*:- This yoga posture helps in stretching the abdominal muscle and massage of pancreas.
- 3) *Matsyasana*:- It stretches the abdominal muscles and also helps in proper toning of the abdominal organs including pancreas.
- 4) *Ardha Matsyendrasana*:- It massages all the abdominal organs like kidneys, pancreas, small intestines, gall bladder and liver. It is best *asana* for diabetes patient.
- 5) *Bhujangasana*:- This asana is known to strengthen the spine and improve in functioning of abdominal organs.
- 6) *Vakrasana*:- It helps to stimulates pancreas and controls the enlargement of

the liver. Also, it helps in removing excess fat around the waist.

7) *Halasana*:- It squeezes and massages all internal organs like pancreas, spleen and activates immune system.

8) *Pavanmuktasana*:- This gas releasing posture helps to brace up the entire system of the body.

9) *Mandukasana*:- This is an extremely beneficial pose for people suffering from high blood sugar as it exerts pressure on the pancreas and improves the function of all abdominal organs.

10) *Dhanurasana*:-In this asana, direct pressure on abdomen which helps in improving the functioning of pancreas and intestines. Regular practice will activate organs like liver, pancreas, and enzyme producing organs.

In shorts above mentioned *asana* squeezes and compress the abdomen and helps to stimulate the pancreatic secretions or hormonal secretions. As a result, more insulin is pushed into the system.

DISCUSSION:

Various *asana* act through different mechanism in concert to optimize the functioning of body and mind. During *asana*, there is rejuvenation/regeneration of cells of pancreas due to abdominal stretching which may increase utilization and metabolism of glucose in peripheral tissues through enzymatic process.^[6] Muscular relaxation, development and improved blood supply to muscles might enhance insulin receptor expression on muscles causing increased glucose

uptake by muscles and thus reducing blood sugar.^[7] *Yoga* postures can lead to improvement in the sensitivity of the Beta cells of pancreas and also improvement in insulin secretion.^[5]

Meditation helps in reduce stress, which help in preventing stress induced diabetes. When all these components are followed over period of time, they help in reducing the blood glucose level. Therefore, there is lot of scope of exploring *yogasana* in the management of diabetes mellitus2.

RESULTS:

Yogasana is not permanent treatment for diabetes mellitus but it can reduce the blood sugar level which is great alternative for diabetes mellitus2 along with proper diabetic diet. Hence from this review study it can be concluded that *yogasana* helps in the management of diabetes mellitus2.

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