

# WORLD JOURNAL OF PHARMACEUTICAL RESEARCH

SJIF Impact Factor 8.453

Volume 13, Issue 22, 990-996.

Review Article

ISSN 2277-7105

# IMPACT OF LIFESTYLE MODIFICATIONS IN PRAMEHA (DIABETES MELLITUS)

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Article Received on 03 October 2024,

Revised on 23 October 2024, Accepted on 13 Nov. 2024

DOI: 10.20959/wjpr202422-34561



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#### **ABSTRACT**

India has the world's biggest diabetic population. It is a condition characterized by persistent hyperglycaemia and disruptions in carbohydrate, lipid, and protein metabolism as a result of insulin resistance and deficiency. The main factors contributing to the rising prevalence of type 2 diabetes mellitus are sedentary lifestyle and dietary changes. Prediabetes is a clinical entity that appears before Diabetes Mellitus and bears a striking similarity to Prameha. Obesity is one of the most modifiable risk factors. Diet and exercise are primary therapeutic options for its management. It is quite difficult to prescribe strict calculated calorie diet, thus it is preferable to provide alternatives among traditional dishes with optional adjustments. Adiabetic patient's condition improves with exercise. Yoga activities, for example, play a function in the prevention of type 2 diabetes. Cost-effective Ayurvedic lifestyle changes and drugs can help to avoid and manage the burden of Prameha.

**KEYWORDS:** *Prameha*, Diabetes mellitus, *Yoga*, *Ahara*.

## INTRODUCTION

Increasing urbanization, industrialisation, and economic progress have a negative impact on the biological and environmental risk factors for diabetes and other communicable illnesses.

www.wjpr.net | Vol 13, Issue 22, 2024. | ISO 9001: 2015 Certified Journal | 990

Diabetes is a major public health challenge of the 21st century. Epidemiological trends indicate that without proper control and prevention diabetes prevalence will increase tremendously. Diabetes like hypertension is not a single disease entity, and its etiopathogenesis is likely to involve the interplay of a host of factors. This metabolic condition is caused by an absolute or relative lack of insulin. Under physiological conditions, pancreatic beta cell activity and individual insulin requirements are in a state of dynamic equilibrium. Normally, beta cells can handle high insulin demands while maintaining metabolic balance. However, in the context of structural or functional pancreatic abnormalities, beta cells may be unable to achieve even the bare minimum of daily insulin requirements (Absolute insufficiency). In certain cases, beta cells may release insulin that is insufficient to fulfil exceptionally high demands (Relative insufficiency), which is caused by anti-insulin antibodies that prevent the produced hormone from functioning correctly. Prameha is considered among the Mutragata Rogas. Premeha is a syndrome that encompasses all clinical disorders characterized by increased urine volume with or without increased frequency of micturition. In nidana of prameha acharya mention the all those factors which increase the quantity of Kapha in the body, Sedentary habits, increase consumption of sweets and fats.<sup>[1]</sup>

Pathya – Apathya ahara: Those Aahar which are suitable to Pramehi are called Pathya and those which induce Prameha are called Apathya. In Pathya Ahara Pramehi Rogi is adviced Mantha, Kashaya, barley, Leha and light easily digestible food, oiled barley, barley cakes, flour of parched grains, lean or fat free meat, soup of Munga, bitter vegetable, old Shali, Shashtika rice, wheat, and millet, pulses of Chanak, Arahar, Kulatha, Munga etc. In oil Danti, Ingudi, linseed and mustard oil can be used. [2] What you choose to eat, how much you eat and when you eat are all important in keeping your blood glucose level in the range.

# Some other food items, Which should be consume in prameha

- Non starchy vegetables Broccoli, Carrots, Greens, Tomatoes
- Starchy vegetables- Corn, Green pea
- Fruits Oranges, Melon, Apples, Berries, Grapes
- Nuts, Peanuts, Dried beans, Eggs, Lean meat

# Pathya vihara in prameha

• According to Acharya Dalhan walking

- Vamana and Virechana Karma is also indicated in Prameha. [3]
- Chankraman
- Ridding on elephant or horse<sup>[4]</sup>
- Yoga Asanas

In *Apathya Ahara*<sup>[5]</sup> *Pramehi* patient is advised to avoid *Sauviraka*, *Tushodaka*, *Shukta*, *Maireya* (Wine), *Asava*, oil, ghee, milk and products like crud, ghee and pudding rice, milk-based sweets, sugarcane items, *Pishtanna*, *Amla Yavagu*, *Panak*, *Gramya-Anupa-Audaka* meat (Meat dishes with high fat contents like beef, pork, fish etc.).

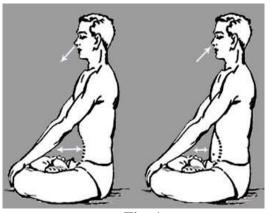
Apathya Vihar – Aasyasukha (Sitting in a comfortable on chair), Swapna Sukha (long duration of sleep), Madhyapana (Alcohol consumption), Avyayama (Avoidance of exercise), Divashswapana (Sleeping in day time)

Yoga practice in *prameha:* Yoga and physical exercise are alternative therapeutic regimen in *prameha.* In the *samprapti* (Pathogenesis) of *prameha* acharyas mentioned that this occurs due to the blockage of *srotas* (Circulatory channels) by the vitiation of doshas which vitiate the *dushyas* (Vitiated tissues elements) and move them to *mutravaha srotas* (Urinary bladder) to cause the disease. By practising *Yoga* and exercises these *doshas* and mala eliminates from body through *svedana* (Fomentation) by loosening the *srotas*. Different type of intense exercise promptly cures *prameha*, as a result regular *yoga* and exercise reduce aggravated *kleda* (Oiliness), *medas* (Adipose tissue), and *kapha* (Heaviness). The primary environmental factor contributing to insulin resistance is obesity and accumulation of this fat in omental and mesenteric regions, correlates with insulin resistance. This deposition of visceral fat can be influenced by exercise and *yoga*. A daily program of *yoga* and vigorous exercise helps to prevent the accumulation of visceral fat. In addition to these, the development of *Prameha* also cause by high levels of mental stress, emotions and persistent worry. These factors can all be managed with regular practice of *pranayama*, *yoga* and meditation.

This *yoga* practises helps in weight loss, increase insulin absorption, reduce stress, enable utility of glucose, enhanced circulation, flexibility, digestive fire.

Yoga asanas beneficial in prameha are Kapalbhati, Vajrasana, Mandukasana, Dhanurasana, Paschimottanasana, Sarvanga Asana. [6]

- **1.** *Kapalbhati* This breathing technique cleanse the body. Carbon dioxide is eliminated in large scale and blood is purified. Tissues and cells absorb a large quantity of oxygen. Stimulation of all Vegas nerve by contraction of abdominal muscles has a beneficial effect in the reduction of depression and normal insulin secretion from pancreas. (fig:1)
- **2.** *Vajrasana* (**Adamantine pose**) Sitting in this asana for half an hour immediately after food, will enhance digestive pow and the stomach work vigorously. (fig:2)





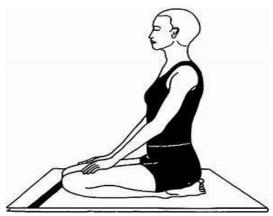


Fig. 2

**3.** *Mandukaasana* (Frog pose): It help to stimulate the pancrease to secrete more insulin in the patient of inadequate insulin secretion defect. (fig:3)

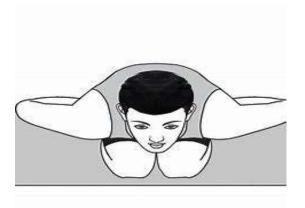


Fig. 3

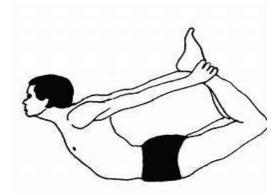


Fig. 4

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- **4.** *Dhanurasana* (Bow pose): This asana reduces the fats, energises digestion, increase peristalsis, invigorates the appetite and relieves congestion of blood in the abdominal viscera and tones them also. (fig:4)
- **5.** *Paschimottanasana* (**Seated forward bend**): This *Asana* specific for corpulence or obesity. It stimulates the abdominal viscera and improves the digestion. (fig:5)

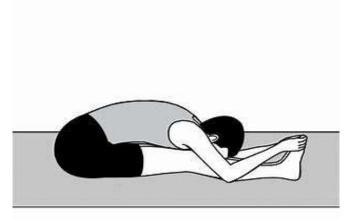


Fig. 5

**6.** *Sarvanga asana* (**Shoulder stand pose**): It acts as a powerful blood tonic and purifier better circulation of blood carries the adequate amount of insulin to act upon the blood glucose level. (fig:6)



Fig. 6

### **DISCUSSION**

Today's sedentary lifestyle, stressful work culture, irregular and irrespective food habit etc are the major risk factor of *Prameha*. *Ayurveda* has greater emphasis on maintaining health and preventing illness than on treating any existing illnesses. For this Acharyas mentioned about *Dincharya*, *Ratricharya* and *Ritucharya*. The chronicity *prameha* leads to various complications i.e., neuropathy, vasculopathy, retinopathy, nephropathy. The prevention of disease can be revealed through *Ahara*, *Vihara* which mean through the lifestyle modification. *Acharya Kashyapa* described *Pathya Ahara* as "*Mahabheshaja*". Along with the medicine *Pathya Apathya* play important role in management disease. Modern dietetics

adopt a reductionist view in determining the diet protocol with emphasis on the macro as well micronutrients in the food and overlooks the varied demands of the person consuming it. Yoga therapies like *Kapalbhati* plays an important role to maintain the normal condition of *Agni* (Digestive fire) at *Grahani* (Duodenum) to normalize the metabolic process of body, which also helps to improve the functions of insulin. In a diabetic state, the force of arterial flow is also boosted and directed to any organ, which is really useful. Standing posture causes the skeletal muscles to contract. Their sugar absorption, which normalizes blood glucose levels. *Yoga* can also help to avoid capillary alterations because of the effect on vessel walls. *Yoga* acts on the microcellular level. Muscles that absorb sugar are more sensitive to insulin when the internal organs are massaged. Additionally, asanas strain the pancreas in an attempt to elevate the position of secretary. *Acharya charaka* mentioned that the person who are greedy for food, does't take bath and physical activity will soon get the *Prameha roga*. [8]

### **CONCLUSION**

To improve our health lifestyle modification is necessary, we can change our habits by taking small steps i.e., morning walk, using of stairs instead of elevator, drink lemonade instead of carbonate drinks, fixes the routine of eating, drink plenty of water, avoids snacks between large meal, add fruits in your meal, avoid prolong sitting in one position, practise *yoga asana*. *Vihara* includes *Dincharya*, *Ritucharya*, *Yoga* act helps to maintain physical and mental well beings. *Yoga asana* increases insulin sensitivity by stimulating the body's auto-healing processes and alleviates *prameha*-related problems. One should take care of one's body by abandoning all other worldly activities, because when the body is deprived, all things are deprived of men.

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