

A CONCEPTUAL STUDY ON DIET AND LIFESTYLE MANAGEMENT OF MADHUMEHA (DIABETES MELLITUS)

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ABSTRACT

Diabetes mellitus is a chronic metabolic disorder in which the body is unable to make proper utilisation of glucose, resulting in the condition of hyperglycaemia. Excess glucose in the blood ultimately results in high levels of glucose being present in the urine (glycosuria). This increase the urine output, which leads to dehydration and increase thirst. India has the largest diabetic population in the world. Changes in eating habits, increasing weight and decreased physical activity are major factors leading to increased incidence of Type 2 Diabetes. Lifestyle and particularly dietary habits play an important role in the development of Diabetes. In *Ayurveda*, by means of proper *Dincharya*, *Ritucharya*, *Pathya-Apathya* & *Ayurvedic* formulation we can treat Diabetes mellitus & reduce its prevalence & complications.

Keywords: *Madhumeha*, Diabetes, diet, lifestyle.

INTRODUCTION

In *Ayurveda*, Diabetes mellitus is known as *madhumeha* (*madhu* means “honey” and *meha* means “urine”). *Madhumeha* is classified as a *MahaRog* (Major Disease). *Madhumeha* is categorized as *vatajmeha*. *Vata* is an *Ayurvedic* humour symbolizing wind and dryness. Deterioration of the body is a characteristic that indicates impairment of *vata*. Maximum deterioration of *dhatus* (body tissues) occurs in this type of disease and this is the reason why all vital organs are affected by Diabetes mellitus. The other prime cause of Diabetes mellitus is impaired digestion. Impaired digestion leads to accumulation of specific digestive impurities which accumulate in the pancreatic cells and impair the production of insulin. *Ayurveda* does

not regard Diabetes mellitus as a disease that can be treated by mere medicine or by a dietary regimen. According to *Ayurveda*, *Prameha* is divided in 3 major types (and total 20 types) *kapha* type (again divided into 10 types). The *Ayurvedic* treatment for this disease is based on an entire change in the lifestyle of the person. Along with medication and diet, the patient is also advised to lead a healthy lifestyle and live an active life.

AIMS AND OBJECTIVES:

- 1) To study the concept of diet and lifestyle in the management of *Madhumeha* (Diabetes mellitus) according to *Ayurveda* & modern medicine science.
- 2) Collect all the references according to

Ayurveda Samhita & modern medicine texts.

MATERIALS AND METHODS:

This conceptual study is based on literary review collected from *Ayurveda Samhita*.

Sedentary Lifestyle¹⁻⁵:

A Sedentary lifestyle is a type of lifestyle with no or irregular physical activity. A person who lives a sedentary lifestyle may colloquially be known as a couch potato. It is commonly found in both the developed and developing world. Sedentary activities include sitting, reading, watching television, playing video games, and computer use for much of the day with little or no vigorous physical exercise. A sedentary lifestyle can contribute to many preventable causes of death. Screen such as a television, computer monitor, or mobile device. Excessive screen time is linked to negative health consequences.

Role of sitting lifestyle in Diabetes:

A February 2013 study published in the International Journal of Behavioural Nutrition and Physical activity surveyed 63,048 middle-aged Australian men about how long they are able to sit during an average day. The responses spanned from less than four hours to more than eight hours of sitting a day. The researchers found that as sitting time increased, so did the risk for Type 2 Diabetes mellitus and other chronic diseases; what's more, even if the men exercised regularly they were still at a higher risk for Diabetes mellitus if they sit for more than four hours a day.

Causes⁶:

Factors those are often responsible for causing Diabetes mellitus:

- 1) Excessive intake of foods which are difficult to digest, such as fried foods, creams, etc.
- 2) Lack of physical exercise, mental stress and strain.

- 3) Excessive sleep overeating and consequent obesity.

- 4) Excessive intake of sugar and refined carbohydrates & fats.

- 5) Hereditary factors also play role in causing Diabetes mellitus.

As described by *Acharya Charaka* and *Sushruta Prameha* run in parlance with Diabetes mellitus as far as the aetiology and clinical presentation is consent. Hence, an effort is made to correlate *Prameha* with Diabetes mellitus.

Management of Prameha⁷:

According to *Ayurveda* the line of treatment of *Prameha* is strictly on individual's constitution.

- 1) *Sanshodhan/ Santarpan: Langhana, Vamana, Virechana*
- 2) *Snehana: Bahya-Aabhyantar*
- 3) *Sanshamana Chikitsa: Laghu Aahar*
- 4) *Pathya-Apthya.* (Diet and Exercises)

Exercise⁸⁻⁹:

Exercise is a physical activity that is planned, structured, and repetitive for the purpose of conditioning any part of the body. Exercise is used to improve health, maintain fitness and is important as a means of physical rehabilitation. Exercise has so many benefits, but the biggest one is that it makes it easier to control blood glucose (blood sugar) level. People with Type 2 Diabetes mellitus have too much glucose in their blood, either because their body doesn't produce enough insulin to process it, or because their body doesn't use insulin properly. Exercise can also help people with Type 2 Diabetes mellitus avoid long – term complications, especially heart problems. People with Diabetes are susceptible to developing blocked arteries (Arteriosclerosis), which can lead to a heart attack. Exercise helps keep our heart healthy and strong and maintain good cholesterol.

Benefits of Exercise:

- Lower blood Pressure
- Better control of weight
- Increased level of good cholesterol (HDL)
- Improve Mood
- Induce Better sleep
- Reduced Stress

Diet¹⁰⁻¹¹:

The role of *Ahara* and *Vihara* are equally or even more important in Diabetes mellitus to control blood sugar level as well as to prevent complications of this disease. In all classics, *Aharadravyas* are described in detail and they cover all the food groups are:-

1. **Cereals:** *Yava* (*Hordeum vulgare* – Barley) are the best. Different preparations of food, prepared from Barley can be given e.g. *Mantha*, *Odana*, *Appopa*, *Roti* etc. Wheat (*Godhuma*), Rice:- *Ayurveda* prescribed old rice (*PuranaShali*), as one of the cereals,

which can be prescribed to the Diabetic patients.

2. **Pluses:** *Mudga* (*Vignaradiata* Green-gram), *Chanaka* (*Cicer arietinum* Linn. – Bengal gram), *Kulatha* (*Dolichosbiflorus*), *Adhaki* (*Cajanuscajan* – Pigeon pea) etc.
3. **Vegetables:** All types of bitter vegetables (*Tiktashaka*) e.g. *Karela* (*Momordicacharantia* – Bitter gourd), *Meethi* (*Trigonellafoenum*– *graecum*), *Patola* (Vietnamese gourd), *Rasona* (*Allium sativum*), *Udumbara* (*Ficus-racemosa* – Cluster Fig Tree).

Glycaemic index:

Glycaemic Index is a figure representing the relative ability of a carbohydrates food to increase the level of glucose in the blood.

Low GI foods = GI value less than 55

Medium GI foods = GI value between 55 and 69

High GI foods = GI value greater than 70

Glycemic Index of Foodstuffs chart:

Sr. No.	Food List	Rating	Glycemic Index
1.	Barley	Low	25
2.	Wheat	Medium	56
3.	Rice(Brown)	Medium	55
4.	Pigeon Pea	Low	22
5.	Chickpeas	Low	33
6.	Horse gram	Medium	51
7.	Green gram	Low	38
8.	Bitter Melon	Low	24
9.	Bitter vegetables	Low	15

Diet and lifestyle Advice¹²:

1. Include whole grains in the diet, such as wheat bread/ brown rice.
2. Cheese and yogurt prepared with skimmed (non-fat) milk may be taken.
3. Use garlic, onion, bitter gourd, spinach, raw banana, and black plum.
4. Avoid sweet, sour, salty oily and spicy foods. Potatoes, fresh grains, pulses

(legumes), heavy foods are also to be avoided.

5. Avoid sweet fruits like, pineapple, grapes, mangoes, etc.
6. Start doing some light exercise, such as brisk walking. Build up to a brisk walk of 30-40 minutes in the morning and again in the evening.
7. Avoid sleeping in the daytime.

DISCUSSION AND CONCLUSION

Lifestyle plays an important role in the development of Type 2 Diabetes mellitus. Absence of proper diet and lack of physical exercise increases the chances of Diabetes. In addition to that increase in sitting work, indoor activities like TV, computer gaming which are now became the essential part of today's lifestyle, enhances the risk of Diabetes. Irregular eating habits, intake of fried foods, fats, sugar, and refined carbohydrates are getting added in the risk of Diabetes. Hence to control and prevent Diabetes mellitus Dietary and lifestyle plans should be made in accordance with day-to-day requirement of an individual. Inclusion of food items like whole grains, garlic, onion, bitter gourd in the diet, avoiding food stuffs which tends to increase glycaemic index like, pineapple, grapes, mangoes etc from diet and involving light exercise like walking, jogging, cycling in day to day lifestyle reduce the chances of Diabetes mellitus. The prolonged use of the above treatment procedure will not only generate the person free from Diabetes mellitus but protect to live a long life.

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