

**Title: Preventive measures and effect of diet on
Madhumeha W.S.R. to NIDDM****Author: Pragati P Koparkar*¹ Vd. Rajiv J Mundane²**

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Corresponding Author: koparkarpp@gmail.com; Mo.no-7028043814*Abstract:**

Background:- *Ayurveda* is a holistic system of life . From ancient to modern times management of *madhumeha* has shifted from holistic to drug oriented. Therefore, the *Ayurvedic* diet was not being much focused. Diabetes Mellitus is one of the archenemies of humankind caused by improper diet.

In *Ayurveda* *Madhumeha* is a disease of *Mutravaha strot as* in which *pippalika* are attracted towards urine of *madhumehi* due to presence of sugar & in modern science Diabetes mellitus is a disease in which sugar in blood increases . Diet constitutes a crucial aspect of the overall management of Diabetes.

Objectives:

- To improve the health through balanced nutrition.
- To study review of literature through *Ayurvedic* texts.

Methods:- The study is based on ancient *Ayurved samhitas* & peer reviewed journals.

Result & Conclusion:- *Ayurvedic* Dietary guidelines are valuable tools in the prevention of type 2 Diabetes.

Keywords:

NIDDM, Diet, *Mutravaha strotas*, *Madhumeha*, *Ayurvedic* Dietary guidelines

Introduction:

Ayurveda is a boundless medicinal science. It has been originated in India about 5000 years back. Unlike other medicinal systems, *Ayurveda* pivots more on healthy living than treatment of diseases. Health is a root cause for attaining this *Purushartha*. So *Ayurveda* has stressed more preventive aspect than curative to maintain the Health of an individual. *Ayurveda* emphasized more on “Prevention is better than cure.

Swathasyaswastharakshanam /

Aturasyavikarprashmanam cha||

(*Ch.su.30/26*)

The main concept of *Ayurveda* is that it personalizes the healing process.

According to *Ayurveda*, the human body is composed of four basics-the *dosha*, *dhatu*, *mala* and *agni*. There is immense significance of all these basics of the body in *Ayurveda*.

Aahar, *Nidra* and *Brahmacharya* are the three important pillars of life. These are also called the *MoolSiddhant* or the basic fundamentals of *Ayurveda*. According to *Ayurveda*, food should be consumed only after the digestion of the previous meal, because it promotes proper digestion, appetite and the right manifestation of the natural urges. The 'Science of Life' (*Ayurveda*) suggest that the diets for people are individualized, based on many factors, such as their age, gender, the *doshic* tendencies, the strength of body tissues and digestive fires and the level of *ama* (toxins) in their body. This is the reason why *Ayurveda* is considered the complete system of healthcare, since ages. This helps people to decide about what type of diet they should consume. One should follow some basic rules, when it comes to consumption of food. The diet therapy is aimed to promote good health and also to increase the longevity of life. *Aahara* (diet) therapy enriches the energy and intensifies the person's mental and physical activities. In today's robotic generation *Prameha* is an instigated issue as it has attracted the interest of the researchers. In 2000, India (31.7 million) topped the world with highest number of diabetes mellitus. State wise Maharashtra and *Tamilnadu* seem to have highest prevalence of diabetes. Therefore, it's a call of population to carry out the preventive steps to fight against the non

communicable disease i.e Diabetes mellitus.

Aims and Objectives:

1. To study the *hetus* of *madhumeha*.
2. To achieve optimal blood lipid concentrations.
3. To provide appropriate energy for reasonable weight, normal growth & development.
4. To improve the health by dietary guidelines.

Material and Methods:

DIABETES:-

Diabetes mellitus known as diabetes is a disorder of carbohydrate metabolism characterized by high blood sugar level and high level of sugar in urine. It is accompanied in many cases by secondary alterations of fat and protein metabolism, resulting in an array of physical disorders.

Diabetes is the result of lack of effective insulin action. Insulin is a hormone secreted by the beta cells of islets of langerhans which are an endocrine portion of the pancreas. This hormone is necessary for release of energy from glucose, which is a simple sugar obtained from carbohydrate sources. As we all know, *Madhumeha* is a disease whose sign and symptoms coincide with the current ideas of diabetes mellitus .

FACTORS PREDISPOSING DIABETES:-

According to *ayurveda* *Madhumeha* is mainly caused due to

Apathyanimitajaahara (unwholesome things) i.e. improper diet habits and also due to lack of exercises.

Asyasukhamswapnasukhamdadhiniagramyoudakanuprasapayansi /

Nawannapanamgudwyakrutam cha pramehahetukaphakruccharwam //

(*Cha. Chi 6/3*)

According to modern science the various factors causes the diabetes:-

1. Acquired and environmental factors:

- Infection: It may precipitate insulin dependent diabetes mellitus (IDDM) or non insulin dependent diabetes mellitus (NIDDM).
- Direct cell cytotoxicity: Alloxan drugs which damage beta cells and produce diabetes.
- Damage beta cell function through other mechanism, such as inadequate
- Protein intake, nitosamines in foods such as those found in smoke, curried mutton, precipitate diabetes.

2. Changes in life style-

- Overnutrition and obesity
- Physical inactivity is an important risk factor in NIDDM
- Malnutrition
- Severe or prolonged stress
- Drugs and hormones
- Pancreatic disorders

3. Metabolic and endocrine disturbances-

Classification Of Diabetes:-

- Insulin dependent diabetes mellitus (IDDM) or Type 1
- Non-Insulin dependent diabetes mellitus (NIDDM) or Type 2
- Malnutrition related diabetes mellitus (MRDM)
- Impaired glucose tolerance
- Gestational diabetes mellitus.

DIET AND DIABETES:-

A balanced diet is one which provides all the nutrients in required amounts and proper proportion .According to *ayurveda* diet should be taken according to age , *agni*, *koshta*, also discuss about which food products are used in diet and included the methods of eating known as ‘*Asthavidhivishesayatan*’ to prevent the diabetes .

Tatrakhalwimanyaasthaaharvidhivishesayataninebhawanti;

*tadyatha-
prakrutikaransayongrashideshkalupayogs
ansthaupayoktaatrasthmani*

(*bhawanti*)//

(*cha.vim.1/21*)

Ushnamsnigdhammatrawatjirnaviryaviruddhamishtadesheishtasarwaupakarnamnatidrutamnatiwilambitamajalpan, ahasan, tanmanabhunjitatmanabhisamikshasamyak //

(*cha.vim.1/24*)

*Matrashisyat /
Aharmatrapunaragnibalapekshnie||*

(cha.sut.5/3)

Yacchapideshkalagnimatrasatmyaniladhibhi/

Sanskartoviryatachhakosthavasthakramyerapi||

Pariharopcharabhyampakatsayongatoapich/

*Virudhamtachyanahitamhrutsampadvidhi
bhichayat||*

(cha. Sut.26/87)

*Yaoudanmrukshamazapivatyammadyatsa
saktunapichapyapupan||*

(cha chi.6/19)

*Mudagadeushyarapitiktashiakiyepuransha
lyodanmadadit |*

*Sasastikamsaytrunadhanyamannamyawa
pradhanastubhawetpramehi/*

*Yawasyabhakshynvividhastathaadyatkafa
pramehimadhusamprauktam||*

(cha.chi6/21)

In the above *shlokas* the eight main guidelines about the diet is given in which the diet is taken according to the *prakrutior* gun of the *padartha* included in diet , the instrument or the sources which helps for cooking the food , the combination of food which is useful or harmful for health ,the amount of diet which varies according to the persons, the place where to eat, time for eating the food , the person who it the diet and the tips about the diet etc. and also elaborate the eating techniques of food which helps to avoid the toxic metabolism of food and prevent from diabetes.

Ayurvedicsamhitas said that Diabetes is a disease of *Medovaha&Mutravahastrotas* in which due to *apathyaahara* there is a production of more *kleda* in body due to which excess *kleda* attracts 16 molecules of water so as to get *prabhoot* and *avilmootra* .so it is mentioned that diabetic patient take the food which is not producing *kleda* to prevent from it .

PATHYAINMADHUMEHA

(Low caloric diet)

*Shook Dhanya:-Jeernashali, Shashtika,
Kodrava, Yava, Godhuma, Uddalaka,
shyamaka*

*ShimbiDhanya:-Chanaka, Adhaki,
Kulattha,Mudga*

*ShakaVarga :-The leafy vegetables with a
predominance of tikta-kashaya rasa,
patola, karvellaka, shigru.*

*PhalaVarga:-Jambu, Dadim,
Shringataka, Amalaki, Kapittha, Tinduka,
Kharjura, Kalinga, Navin Mocha.*

APATHYAINMADHUMEHA:-

(High caloric diet)

*Aahara:-Jala, Milk, Ghee, Oils, Curd,
Sugar, Different types of rice
preparations, anupa, gramya and
audakamamsa, ikshurasa, pishtanna,
Navanna.*

DIETARY GUIDELINES ACCORDING TO MODERN SCIENCE:-

- Maintain ideal body weight.
- Choose simple carbohydrates.
- Protein from vegetarian sources.
- Restriction on Fats and Oils.

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- Increase Fiber in diet salads.
- Add salads, whole pulses, whole cereals, & sprouts in meal.
- Fixed meal timings.
- Avoid skipping meals or Fasting.
- Go for smaller meal.
- Moderate use of alcohol.
- Eat at the same time every day, at least within 1 hour of regular time.

Foods avoided, prescribed & allowed liberally in diabetes:-

Foods avoided	Foods allowed in prescribed amount	Foods Allowed liberally in DM
Sugar, jiggery, sweets, candies, jams, jellies etc.	Cereals such as wheat, rice, jowar, bajra, ragi etc.	Clear soups
Alcohol & alcoholic beverages, soft drinks.	Spaghetti, macaroni, noodles, bread etc.	Raw and green leafy vegetables.
Concentrated milk preparations, mawa preparations, and other sweets.	Dals and pulses.	Thin buttermilk
Fried preparations	Root vegetables such as potato, yam, sweet potato	Spices to taste
Nuts and oilseeds such as groundnut, coconut etc.	Vegetable oils.	
Vanaspati-ghee, cream, etc	Lean meat, fish, and eggs	
Fatty meat cuts, organ meats like liver, kidney, brain etc	Fruits according to exchange list.	
Bakery products such as cakes, pastries, sweet biscuits etc.		

Discussion:

Dietary habits plays an important role in the development of *madhumeha* (Type 2 Diabetes). Absence of proper diet increases the chances 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 plans should be made in accordance with day-to-day requirement of an individual. According to *Ayurvedic* dietary guidelines the diet of diabetic patient include the foods which not produce the

kleda which is the main factor for diabetes i.e. the low caloric diet which is also mentioned in modern text also the methods of eating, cooking food is also mention in *ayurvedic samhitas* which is more important to prevent the diabetes.

Conclusions:

This review of *Madhumeha* showed that the disease can be well managed by following *Pathya-Apathya* mentioned in *Ayurveda* (Avoidance of etiological factor.). Considering detailed conceptual part we can defiantly say that *Ayurveda* describes appropriate diet management called as *ahar* for the prevention of *Madhumeha* (DM).

References:

1. Acharya Vidhyadhar Shukla, Prof. Ravi Dutt Tripathi, Charak samhita, volume1, sutrasthan

- chapter 5/3.chaukhamba Sanskrit SansthanVaranasi; 2010, 81.
2. Ibid Charak samhita 382.
3. Ibid Charak samhita, Vimansthan chapter 1/21, 554.
4. Ibid Charak samhita, Vimansthan chapter 1/24, 557.
5. Ibid Charak samhita, Chikitsasthan chapter 6/4, 167.
6. Ibid Charak samhita, Chikitsasthan chapter 6/19, 20, 21., Page171.
7. Shri. Yadunandanopadhyaya, Madhavnidan, Chaukhamba Sanskrit Sansthan Varanasi 2nd Part, Reprint 2010; Chapter 33.
8. K. Sembulingam, Premasembulingam Essential Of Medical Physiology 5th Edition Section 6, Endocrinology Chapter 69 Endocrine Function Of Pancreas .2010
9. [https://www.diabetes self management.com/](https://www.diabetesselfmanagement.com/) (time-3.45pm)

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