

## Recommendation to Prevent and Control Type-II Diabetes through Ayurvedic Principles

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### Abstract

The World Diabetes Foundation expects 80% of new cases emerge in the developing world, as a result of increased urbanization, sedentary and stressful lifestyles. The response to faulty lifestyle and disturbed psychological conditions varies person to person because each has different bodily and psychic constitution. However, these factors play certain role in the development, progression, prognosis and treatment of disease. The faulty life-style affects one's mind and homeostasis of body by several psychosomatic mechanisms. Many life style disorders are wing sprouted-up with genetic disposition. Type-2 diabetes is one of such diseases, which is adversely affected by the unwholesome diet, fast & stressful life style with sedentary habits. The following of *Ayurvedic* principals of *Ashta Aaharvidhi Vishesha Ayatanani*, *Dinacharya*, *Rutucharya*, *Achara Rasayana*, and *Sadavrita* can be an appropriate answer to inhibit this life style disorder. Therefore, in the present review article, attempt has been made for recommendation to follow *Ayurveda* principal related to diet and life style for prevention and control of type-II Diabetes in India and globally.

### Keywords

*Ayurvedic Principles*, *Achara Rasayana*, *Ashta Aaharvidhi Vishesha Ayatanani*, *Dinacharya*, *Rutucharya* and *Sadavrita*.



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## INTRODUCTION

*Ayurveda* is one of the most ancient health sciences of the world. It conceives and describes the basic and applied aspects of life process, health, disease and its management in terms of its own principles and approaches. It aims not only to eradicate the disease but also to maintain the health of healthy individual. Therefore, *Ayurvedic* classics describe the principals of healthy living. But unfortunately we start to live in urbanisation with indulgence of unhealthy life habits, which may cause life style disorders like diabetes.

The syndrome diabetes mellitus is covered under the broad heading of *Prameha*, while the type-II diabetes can be correlated with the *Madhumeha*, which is described as a sub type of *Vatic Prameha*, in all the classics of *Ayurveda*<sup>1</sup>. In the aetiopathogenesis of disease, provoked *Vayu* along with accumulated *Kapha* and *Meda* play main role, involving *Medodhatvagni* and *Mamsa, Rasa, Kleda* etc. ten *Dushyas*<sup>2</sup>.

## EPIDEMIOLOGY

### Survey of the W.H.O & I.D.F.<sup>3</sup>:

- Today more than 245 million people worldwide are living with diabetes and by 2025, the total is expected to increase to

over 380 million people and each year another 7 million people develop diabetes.

- Type-2 diabetes is responsible for 90 - 95% of diabetes cases.

### Figure of Diabetes in India<sup>4</sup>:

- India has the world's largest diabetes population with estimated 35 million diabetic patients and it will touch to 57.2 million by the year 2025.
- World Health Organization (W.H.O.) has projected that the maximum increase in diabetes would occur in India.

### Need of hours:

- Diabetes is a global problem with devastating human, social and economic impact. International Health Organization has long been warning of a Diabetes epidemic in India. The numbers show a huge increase in this chronic disorder<sup>5</sup>.

- WHO projects that diabetic deaths will increase by more than 50% in the next 10 years without urgent action<sup>6</sup>.

- Type-2 diabetes is increasing at alarming rates globally as a result of increased urbanization, high rates of obesity, sedentary and stressful lifestyles<sup>3</sup>.

- The 80% of type 2 diabetes is preventable by changing diet, increasing physical activity and improving the living environment<sup>6</sup>.

Thus, it is need of hours to think for preventive aspect of the disease. Since *Ayurveda* is knowledge or science of life, can guide us more pronounce way to modify our faulty life style. So that we can make the society free from type-II diabetes.

From the last few decades, the entire world is changing towards capitalised development. As a part of it people also starts to live in capitalization or urbanization, which grossly affected the each corner of everyone's life style in three dimensions.

- Dietary factors
- Lifestyle factors and
- Psychological factors

#### **Dietary factors:**

Fast life of today's era, invoke a trend in daily dietary habits of fast food and junk food. It is usually containing bread like *Pishta Anna*, unsaturated oil and milk products like chees and pannier, which is heavy to digest and not *Satmya* to the body. Therefore they hampers the function of *Agni* leading to produce *Aam* at *Jatharangi* as well as *Dhatvagni* level, may causes many metabolic life style disorders like diabetes.

#### ***Ashta Aaharvidhi Vishesha Ayatanani*<sup>7</sup>:**

It is a proper way of eating described in *Ayurvedic* texts, comprising eight factors of

food: *Prakruti* (natural qualities), *Karana* (preparation), *Samyoga* (combination), *Rashi* (quantity), *Desha* (habitat), *Kala* (time), *Upayoga Sanstha* (rules to use) and *Upayokta* (user). Thus *Ashta Aaharvidhi Vishesha Ayatanani* is an appropriate solution to correct the faulty dietary factors.

#### **Lifestyle factors:**

As we entered in 21<sup>st</sup> century with modernisation in each and every walk of life, man is replaced by machine in most of the mechanical job, while the man is just controlling the those machines. It reduces human physical labour but at the same time be a reason of sedentary life. That may be causes of excessive accumulation of *Kapha*, *Pitta*, *Meda*, *Mamsa*, *Kleda* etc., leading to obstruction of *Vata* and initiate the pathophysiology of *Madhumeha* or type-II DM<sup>8</sup>.

#### ***Dinacharya*<sup>9</sup> and *Rutucharya*<sup>10</sup>:**

In Sanskrit the daily routine is called the *Dinacharya*, and seasonal routine is called the *Rutucharya*. *Ayurveda* recommends that in order to be optimally healthy and disease free, we should follow the principals *Dinacharya* and *Rutucharya*. *Dinacharya* describes the daily routine from getting up to go for sleep, while *Rutucharya* describes what the changes we should make

in the daily routine as per the season. Following of the *Ayurvedic* principals of *Dinacharya* and *Rutucharya* can be a solution for faulty life style factors.

### **Psychological factors:**

Psychological conditions like *Chinta* (worry), *Lobha* (greed), *Shoka* (grief), *Bhaya* (fear), *Krodha* (anger) etc. are described as *Manasikabhava* in ancient *Ayurvedic* texts<sup>11</sup>. As the *Manasikabhava* crosses their physiological limit, are considered as *Manasika Vikara*-pathological state adversely affect body and mind. It is recommended to control these *Manasikabhavas* for maintaining physical and mental well being<sup>12</sup>. Restless daily schedule of urbanised life, produces lot of stress and tension in daily life affecting the mind at subconscious level to disturb psychological conditions and causes many psychosomatic disorders, DM type-II is one of them.

### ***Achara Rasayana*<sup>13</sup> and *Sadavrita*<sup>14</sup> (Good Conducts):**

Being a holistic science with equal emphasize on the mind and body, *Ayurveda* also describes *Rasayana* for psychological along with physical one. For the mental wellbeing *Acharya* advises to regularly follow the social and behavioral good

conducts, which is known as *Achara Rasayana*. A set of various good conducts are mentioned in the context of *Sadavrita* is also consider in *Achara Rasayana* as by following those one can attains longevity. By following code of good conducts regularly, one can control his disturbed *Manasikbhava* within the normal limits and obtain the best of psychological health. Thus *Achara Rasayana* and *Sadavrita* can be management of disturbed psychological factors.

## **DISCUSSION**

Majority of urban population having habit to take *Madhura*, *Snigdha*, *Guru* property of food. They increase *AmaroopKapha* and *Meda* respectively, which play vital role in the etiology of *Avaranajanya Madhumeha*<sup>7</sup>. From the modern perspective, certain food have high glycemic index, which increase blood glucose level rapidly. These include: Cheese (50), ice-cream (60), sugar (64), Banana (56), Dates (103) etc<sup>15</sup>. Thus they immediately increase plasma sugar. In the ancient era there were no such instruments to search out the glycemic index of foods but they observed and find out that the consumption of such food article, produce the problem like polyuria. Therefore such

foods are mentioned as *Nidana /Apathyaahara* of *Prameha*.

Hence there is need to correct the food habit to prevent from diabetes. *Ayurveda* has answer of how to and what to eat in term of *Ashta Aaharvidhi Vishesha Ayatanani*<sup>7</sup>, which recommend us to take a food considering our self including individual's *Agni*, so it doesn't produce *Ama* and subsequently helps to eradicate any disease.

In the urbanized life style we start to consume high calorized food, while on the other hand we reduce our physical work significantly. So, extra or unwanted calorie is stored in the body as fat/*Meda*. All the sedentary life habits found as causative factors are because of modern fast life, while none is devoting time for exercise. The sedentary life style again increases the *Amaroop Kapha* and *Meda*, which obstruct the path of *Vata*. Thus obstructed *Vata* get provoked and localized in *Mutravaha srotas* and manifest the symptoms of *Avaranajanya Madhumeha*<sup>8</sup>.

*Ayurvedic* principal of *Dinacharya*<sup>9</sup> and *Rutucharya*<sup>10</sup> is for healthy and disease free living. The sedentary life style should be modified as per the *Dinacharya-Rutucharya* mentioned in *Ayurvedic* classics and included *Vyayam* like habits, which reduced

accumulated *Amaroop Kapha* and *Meda* for avoiding the type-II DM.

Mental stress, anxious state of mind, tension etc. do have effect on brain activities specially of Autonomic Nervous System (ANS), governed by hypothalamus and limbic system, which are very sensitive towards the emotions<sup>16</sup>. When the *Manasabhavas* cross their physiological limit, they are considered as *Manasika Vikara* - a pathological state, which may adversely affect the function of ANS. The modern fast & stressful life style disturbs the positive and negative *Manasabhava*, which keep the mind in high sympathetic tone, causing release of stress induced neurochemicals that affect the insulin utilization, causing insulin resistance. On the other hand disturbed psychological factors cause increase of blood glucose by converting glycogen back to glucose (glycogenolysis) and catabolizing stored triglycerides and proteins in to glucose (gluconeogenesis)<sup>17</sup>.

To remain stress and tension free, *Ayurveda* has advised to follow the *Achara Rasayana*<sup>13</sup> and *Sadavrita*<sup>14</sup>. So one's psychological factors not disturbed and can enjoy the life happily. Even in this modern time it is equally useful for the mental health

and prevents psychosomatic disorder like diabetes.

## CONCLUSION

Thus it can be concluded that the unwholesome diet, inactive lifestyle and disturbed psychological health play a primary role in precipitation of type-II DM. Hence it can be recommended to follow *Ayurveda* principals of *Ashta Aaharvidhi Vishesha Ayatanani* instead of fast & junk food, *Dinacharya & Rutucharya* instead of sedentary life style and *Achara Rasayana & Sadavrita* to remain stress & tension free for the prevention and control of type-II Diabetes in Bharat and globally.

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