



NUTRITION TO COMBAT DIABETES-AYURVEDIC PERSPECTIVE

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ABSTRACT

Nutrition is of paramount importance in the management and prevention of type 2 Diabetes. Urgent solutions for slowing, or even reversing, this trend are needed, especially from investment in modifiable factors including diet, physical activity, and weight. The importance of nutrition in the management and prevention of type 2 diabetes through its effect on weight and metabolic control is clear. In classical texts of Ayurveda, a systematic and evidence-based approach to the management of diabetes through diet, and its effectiveness has been demonstrated. Keeping in view the pathya-apathya concept this article highlights the dietary recommendations for diabetes according to Ayurvedic system of medicine.

KEYWORDS: Nutrition, diabetes mellitus type 2, Ayurveda, pathya- apathya

INTRODUCTION

Diabetes is one of the biggest global public health problems: the prevalence is estimated to increase from 425 million people in 2017 to 629 million by 2045, with linked health, social, and economic costs.^[1] It is recognized as an important cause of premature death and disability. It is one of four priority noncommunicable diseases (NCDs) targeted by world leaders in the 2011 Political Declaration on the Prevention and Control of NCDs.^[2] Diabetes is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood glucose), or when the body cannot effectively use the insulin it produces.^[3]

Being overweight or obese is strongly linked to diabetes.^[4] Causative factors, such as being overweight or obese, unhealthy diet, insufficient physical activity and smoking are modifiable through behavioural and environmental changes. Several effective policy options are available to facilitate these behavioural changes and create supportive environments for healthy lifestyles. At the individual level, intensive interventions to improve diet and physical activity can prevent or delay the onset of type 2 diabetes in people at high risk. WHO has developed recommendations on healthy diet and physical activity that, if implemented, can reduce an individual's risk of type 2 diabetes and other NCDs.^[5]

“Let The Food Be Thy Medicine And Medicine Be Thy Food”

The above said quotation holds true in today's increasing incidences of diseased conditions. Needed is the awareness and true knowledge regarding the diet and nutrition in a healthy state and in specific diseased conditions. In this article effort has been made to explore the dietary (pathya-apathya) concepts of Ayurveda with special reference to diabetes.

In the present era, the burden of lifestyle and metabolic disorders is on the rise. Ayurveda the science of life has got the enough potential to prevent such diseases. The main aim of Ayurveda is to maintain the health of the healthy person and to cure the disease of the diseased.^[6]

Taking all these things into considerations, it is the most burning health related issue. Apart from the medicinal treatment, Medical nutrition therapy is an integral component of diabetes management and of diabetes self-management education. There is considerable effect of the nutrition therapy which includes proper diet and exercise. Diabetes is a metabolic disorder that can be only prevented and managed by lifestyle and dietary modifications.

Goals of Medical Nutrition Therapy that apply to all persons with diabetes are as follows

Attain and maintain optimal metabolic outcomes including

- Blood glucose levels in the normal range or as close to normal as is safely possible to prevent or reduce the risk for complications of diabetes.
 - A lipid and lipoprotein profile that reduces the risk for macrovascular disease.
 - Blood pressure levels that reduce the risk for vascular disease.
2. Prevent and treat the chronic complications of diabetes. Modify nutrient intake and lifestyle as appropriate for the prevention and treatment of obesity, dyslipidemia, cardiovascular disease, hypertension, and nephropathy.
 3. Improve health through healthy food choices and physical activity.
 4. Address individual nutritional needs taking into consideration personal and cultural preferences and lifestyle while respecting the individual's wishes and willingness to change.^[7]

Foods containing carbohydrate from whole grains, fruits, vegetables, and low-fat milk should be included in a healthy diet. With regard to the glycemic effects of carbohydrates, the total amount of carbohydrate in meals or snacks is more important than the source or type. The primary dietary fat goal in persons with diabetes is to limit saturated fat and dietary cholesterol intake.

Pathya-Apathya Unique Treasure of Ayurveda

Thousands of years ago, our ancient *vaidyas* have mentioned about the importance of *pathya apathya* in the terms of diet and lifestyle regime. The aahar vuhar which is beneficial and nutritional to the body and also give happiness to mind is known as pathya and opposite to that is known as apathy.^[8] *Ayurveda* is an ocean of knowledge of unknown depth having immense explanations regarding the diet and lifestyle. Some examples quoting the importance are as follows:

“Tat cha nityam prayunjeet svasthyam yen anuvartate. Ajaatanam vikaranam anuttpatikaram cha yat.”

(The diet which besides providing the basic nutrition to the body, helps to maintain the healthy state of the body and prevents the occurrence of diseases should be consumed).^[9]

An interesting verse regarding the importance of wholesome diet goes as:

“Pathye sati gadaartasya kim aushadh nishhevane. Pathye asati gadaartasya kim aushadh nishhevane.”

(If wholesome diet is given in a planned way, then there is no need to administer medicines and if wholesome diet is not being used then too there is no need to give medicine, as this is not going to cure the disease in the absence of wholesome diet).^[10]

In Ayurveda, the therapy emphasizes on preventive (*swasthasya swasthya rakshanam*) and curative

(*aaturasya vikara prashamanam cha*)^[11] aspects; with its unique concept of *pathyas* (do's) and *apathyas* (don'ts).^[12] According to ayurveda, diabetics are of two types: obese (*sthula pramehi*) and lean (*krisha pramehi*).^[13] The nutrition for the former should include weight loss regime and for latter it should be weight gaining regime (*santarpana*).^[14] Because of the effects of obesity on insulin resistance, weight loss is an important therapeutic objective for persons with type 2 diabetes. Short-term studies have demonstrated that weight loss in subjects with type 2 diabetes is associated with decreased insulin resistance, improved measures of glycemia and dyslipidemia, and reduced blood pressure. Therefore, the emphasis of nutrition therapy for type 2 diabetes is on lifestyle strategies to reduce glycemia, dyslipidemia, and blood pressure. These strategies should be implemented as soon as the diagnosis of diabetes is made.

The diet should be a balanced one rather than just low sugar/calorie diet as the hypoglycaemia is a major complication of diabetes. Apart from the anti-diabetic herbs, the method of preparation plays a key role in bringing out a balanced dietary meal. Here are few of the principles mentioned in the classical texts and different recipes which can prove to be very beneficial to diabetics.

Barley (*yava*) should be the principle food of choice. It can be used in the form of different food preparations. Such as:

- “*Yavaudana*” can be prepared by boiling dried and crushed barley grains and removing the excess of water.
- “*Vatya*” (barley porridge) can be prepared when the dehusked and crushed barley grains are boiled and excess water is retained in the preparation.
- “*Saktu*” (roasted corn) and “*Apupa*” (pan cakes) prepared from barley and corn) mixed with meat soup of gallinaceous and pecker birds and animals inhabiting arid land.
- “*Manthas*” (flour of different types of corn mixed with water).
- *Kashayas* (decoctions) prepared from various herbs and vegetables Old *shali* rice cooked and mixed with soup of **mudga** and Preparations of bitter vegetables (**tikta dravya**) like neem, patola, karela, etc.

Cooked *shashtika* rice and *trinadhanya* mixed with the oil of lentil, *ingudi*, *atasi* and *sarshapa*.^[15]

Medicated beverages of different flavours can be made:

- *Sarodaka* (water boiled with heart wood of *khadira*),
- *Kushodaka* (water boiled with *kusha*),
- *Madhoodaka* (water mixed with honey),
- *Triphala udak* (juice or decoction of *amalaka*, *haritaki* and *bibhitaki*)
- *Seedhu* (a type of wine which is properly fermented)

- **Madhvik** (another type of wine which is of superior quality and which is prepared after fermenting for a long time.^[16])

Ahara should be **balya** and **ojovardhak** but not **kapha vardhak** as the disease diabetes which can be correlated with diabetes is **prameha** or **madhumeha** being caused by predominance of **kapha dosha**.^[17] it is of prime importance to mention the loss of **oja(strength)** of the body in this deadly disease which is why it is called as one of the **ashta maharoga**.^[18] Therefore the herbs which help in immunostimulatory effect (e.g. **giloy, haridra**) can be used in the form of herbal decoctions.

The following food items should be taken in our diet: **shyamaka, kodrava, uddalaka, godhuma, chanaka, adhaka, kulattha**, meat of animals and eggs of birds of desert like region/arid land-stored for longer time after harvesting.^[19]

- **Giloy juice** along with honey cures all types of **pramehas**.
- **Dhatri (amalaki)juice with haridra** powder and honey.
- Powder of **triphala** with honey and ghee.
- Powder of **pippali maricha shunthi** is found beneficial in **prameha** as it decreases **kapha** and **meda(fat)**.^[20]

The following eatables are helpful in case of **prameha**: **nivara, kangu, soft bamboos, kalma** variety of rice, pigeon pea, laja of paddy, honey, buttermilk, urine of an ass, urine of a buffalo, pigeon, rabbit, partridge, lava, peacock, bhringaraj bird, deer, duck, parrot, Drumsticks, **patola, karvellaka, karkota, palm fruit, vyaghri fruit, udumbara** fruit, garlic pearls, fresh banana fruits, leaves of **pattura, musakarni and arka guduchi, triphala herbs, kapittha, jambu kaseru, kamala, kamal kanda, kamal utpala, kharjura, trikatu herbs, tindika phala, khadira,** and water melon.^[21]

AVOID

What not to take is also equally important. Here are some of the food articles which should not be included in the diet of a diabetic.

Sauviraka (fermented gruel/fermented liquor by using cooked barley.

Sura (beer/ fermented liquor by using cooked rice etc. Oils, milk ghee, Jaggery, Processed food, Sugarcane juice Food prepared from meats of **animals of marshy regions** Holding urge to urinate, smoking, fomentation, bloodletting therapies, Remaining seated by side of the soft cushions.

Sleeping during the day hours and indulging in the intercourse not to take curd in excess quantity

Fresh cereals, dates, fruits

Incompatible food items, Ash gourd, Contaminated water, Salty, Oily pastries, Laxative stuffs Meats of animals of **aquatic** regions.^[22]

CONCLUSION

Because many persons with type 2 diabetes are overweight and insulin resistant, medical nutrition therapy should emphasize lifestyle changes (people should follow proper **dincharya, ratricharya and ritucharya**) that result in reduced energy intake and increased energy expenditure through physical activity (**vyayama** and **yoga**). Increased physical activity can lead to improved glycemia, decreased insulin resistance, and reduced cardiovascular risk factors. Division of food intake, three meals or smaller meals and snacks, should be based on individual preferences. Further the above mentioned dietary articles can be transformed into mouthwatering healthy and nutritive delicacies by application of **samsakaras**. As the beauty of **Ayurveda** lies in its own unique principle of individuality (**purusham purusham veekshya**).^[23] We should eat healthy according to our body. Ultimately.

“It Is Not A Short Term Diet But It Is A Long Term Lifestyle Change.”

REFERENCES

1. International Diabetes Federation. *IDF diabetes atlas*. 8th ed. IDF, 2017. www.diabetesatlas.org Google Scholar
2. Resolution 66/2. Political Declaration of the High-Level Meeting of the General Assembly on the Prevention and Control of Noncommunicable Diseases. In Sixty-sixth session of the United Nations General Assembly. New York: United Nations; 2011.
3. Definition, Diagnosis and Classification of Diabetes Mellitus and its Complications. Part 1: Diagnosis and Classification of Diabetes Mellitus (WHO/NCD/NCS/99.2). Geneva: World Health Organization; 1999.
4. Global status report on noncommunicable diseases 2015. Geneva: World Health Organization; 2015.
5. **WHO** Global report on diabetes.
6. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 30; 26.
7. American Diabetes Association: Diabetes Care 2004 Jan; 27 (Suppl 1): S36-S36. <https://doi.org/10.2337/Diacare.27.2007.S36>
8. Charaka Samhita With Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 25; 45.
9. Charaka Samhita With Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 5; 13.
10. Lolimbaraja, Pratham Vilasa, Vaidya Jeevana, Editor Priyavrat Sharma, Chaukhambha Surbharti Prakashan, Varanasi, 2013; 6.

11. Charaka Samhita with Commentary of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 30; 26.
12. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 23; 5.
13. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Chikitsa Sthan, Chapter 6; 15.
14. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Chikitsa Sthan, Chapter 6; 15-16.
15. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha,(Charak Samhita Chikitsa Sthan, Chapter 6; 20-21.
16. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Chikitsa Sthan, Chapter 6; 46.
17. Charaka Samhita with Commentary Of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Chikitsa Sthan, Chapter 6; 4.
18. Murthy Prof. K. R. Srikantha, Susruta Samhita of Maharshi Sushruta, Vol-1, Varanasi; Chaukhamba Orientalia; 2012, p-Su. 233. Bhava Prakasha Of Bhavmishra (Text With English Translation, Notes, Appendeces And Index); Vol.Ii (Madhyama And Uttara Khanda) Translated By: Prof Kr Srikanta Murthy; Madhyama Khanda Part 3 Chapter 38/41 43
19. Sharangadhara Samhita Of Pandit Sarngadharacharya Containing Anjana Nidana Of Maharshi Agnivesha Annovated With Dipika Hindi Commentary By Dr Brahmanand Tripathy; Chaukhambha Surbharti Prakashan,Varanasi.
20. Dietary Rules And Prohibitions In Different Diseases(Based On Bhesajya Ratnavali)Pathya-Apathya Vichara; Compiled By Dr Kanjiv Lochan, Ph.D, Chaukhambha Sanskrit Sansthan,Varanasi ch 32; 234-249.
21. Dietary Rules And Prohibitions In Different Diseases (Based On Bhesajya Ratnavali) Pathya-Apathya Vichara; Compiled By Dr Kanjiv Lochan, Ph.D, Chaukhambha Sanskrit Sansthan,Varanasich 32; 250-253.
22. Charaka Samhita With Commentary of Chakrapani By Vaidya Harish Chandra Kushwaha, (Charak Samhita Sutra Sthan, Chapter 1; 123.