



**ILAJ BIL GHIZA IN THE MANAGEMENT OF DIABETES MELLITUS**

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**ABSTRACT**

Diabetes mellitus is one of the major public health problem worldwide. *Ilaj bil ghiza* aimed at gaining the person's original harmony, brought about by diabetes mellitus. Unani system of medicine provides different diet for people of different depending upon their age, built, temperament etc., diet advised for old persons is different than a young one and a pregnant woman requires different food than a non-pregnant woman. In *Unani tibb* anything we eat is categorized into different parts like diet, herbs, spices, therapeutics and pharmaceuticals. Food is also categorized on the basis of its temperamental properties. So there are specific foods which have hot temperament, but with different levels of either dryness or moistness. As well as, there are other foods which have cold temperament, but with either dryness or moistness. In *Unani Tibb*, this quality is linked to the effect of different foods have on the metabolism and formation of the humours (*akhlat*). Hot temperament food will increase the basic metabolic rate of body and cold temperament food will have the opposite effect. In this review paper it is attempted, to summarise the role of *ilaj-bil-ghiza* in the management of diabetes mellitus.

**KEYWORDS:** Diabetes mellitus, *ilaj bil ghiza*, temperament of food.

**INTRODUCTION**

Diabetes is a major cause of morbidity and mortality worldwide.<sup>[1,2]</sup> The problem of diabetes is particularly relevant to India as several studies have clearly documented an increased ethnic susceptibility to diabetes in migrant Asian Indians.<sup>[3,4,5,6,7]</sup> Recent epidemiological studies have pointed to the growing epidemic of diabetes in India.<sup>[8,9,10,11,12,13]</sup> Indeed, according to the recent Diabetes Atlas by the International Diabetes Federation (IDF), India is home to the largest number of people with diabetes in the world, 40.9 million diabetic subjects in 2007 and these numbers are predicted to increase to 69.9 million by 2025.<sup>[14]</sup>

Several lifestyle factors affect the incidence of type 2 diabetes.<sup>[1,2]</sup> Obesity and weight gain dramatically increase the risk and physical inactivity further elevates the risk, independently of obesity.<sup>[6,11]</sup> In addition, a low-fibre diet with a high glycaemic index has been associated with an increased risk of diabetes,<sup>[11,13]</sup> and specific dietary fatty acids may differentially affect insulin resistance and their risk of diabetes.<sup>[14,15,16]</sup>

The preventive medicine in unani system is based on Asbab-e-Sitta-Zarooriah 6 essential prerequisite, these are as follows:

- *Hawa-e-Muheet* (atmospheric air)

- *Makool wa Mashroob* (food and drinks)
- Harkat wa sukoon-e-badni (physical movement and rest)
- Harkat wa sukoon-e-nafsani.(Mental activity and rest)
- *Naom wa Yaqza* (sleep and wake fullness)
- *Ehtibas wa Istafraqh* (retention of essential and excretion of wastes).<sup>[17]</sup>

These 6 factors essentially influence each and every one and all mental and somatic diseases call, because of their imbalance. The correct application of these factors can lead to a long and healthy life. *Makool wa Mashroob* are one of these essential factors which also play a very important role in our life for the protection of many diseases. In Unani System of Medicine dieto-therapy is a unique non medicinal therapy by which the patients are treated and health is obtained through modulation in dietary habits.<sup>[17]</sup>

Unani system of medicine believes in holistic approach to the prevention and treatment of diseases. It covers physical, mental and spiritual dimensions of an individual's health. The temperamental / humoral theory provides a comprehensive understanding of the risk factors, pathological processes and therapeutic interventions for the effective management and treatment

of lifestyle diseases. Lifestyle diseases are the conditions which arise from poor management of the governing factors (*Asbab-e-Sitta Zarooriyah*) over a long period of time. This finally results in the change in temperament of body which is beyond the ability of Tabi<sup>at</sup> to deal with and causes *fasaad* (disturbance) at humoral level either by accumulation of excessive or abnormal humour. This condition further leads to functional imbalances. Therefore, the Unani approach to the prevention and treatment of these lifestyle and chronic diseases is aimed at avoiding the abnormal changes in six essential factors which can be restored by maintaining balance in *Asbab-e-Sitta Zarooriyah*.<sup>[18]</sup>

According to Unani philosophers Ibn-e- Sina, Abu Sahal Masihi and Rabban-Tabri there are 4 types of naturally occurring edible things that is,

- *Ghiza* (food)
- *Dawa* (drug)
- *Ghiza-e-Dawai*(food cum drug)
- *Dawa-e-Ghizai*(drug cum food)

*Ghiza* and *Ghiza-e-Dawai* includes cereals, pulses, fruits, vegetables, eggs, meat, sugar, honey, etc. While *Dawa* and *Dawa-e-Ghizai* include different plant parts, herbal, animal & mineral items including horns, teeth, liver, brain, fat, blood, glands and wag's of animals and birds and *Zavi-al-ajsad* (gold, zinc, silver, copper, iron), *Zavi-al-arwah* (sulphur, mercury, arsenic), *Hajaryat* (diamond, jad, sapphire) and *Araziaat* (*gil-e-makhtoom*, *gil-e-armani*, *gil-e-multani*) from mineral origin. *Ghiza* and *Ghiza-e-Dawai* are used to maintain physical and mental health and *Dawa* and *Dawa-e-Ghizai* are used to treat the diseases, not only by providing nutrition but also by combating the disorder either by their action on the micro-somal-enzyme systems of the body or on microorganism directly. Basically, *Ghiza-e-Dawai* and *Ghiza* nourishes the body and ultimately enhances the body resistance to protect the body from disease.<sup>[19,20,21]</sup>

**Diet and Lifestyle modifications required for combating type 2 DM (Diabetes mellitus) are as follows**

- Increase the intake of green leafy vegetables.
- Consume less salt; avoid adding or sprinkling salt over cooked and raw food.
- Restrict all forms of sugar and refined carbohydrates. E.g. biscuits, breads, cakes, etc.
- Usage of white sugar to be substituted with Jaggery.
- Steamed and boiled food should be preferred instead of fried food.
- Have fresh lime water instead of carbonated drinks and other aerated drinks.
- Avoid eating fast or junk foods, Instead of fried snacks, eat a fruit.
- In day-to-day practices, it is best to use mixture of oils.
- Avoid the reuse of cooking oil.

- Oils which can be mixed and matched are mustard oil, Soya bean oil, groundnut oil, olive oil, sesame oil and sunflower oil, Ghee, Vanaspati, Margarine.
- Butter and coconut oil are harmful, hence they should be moderated.
- Cleansing the body through fasting.
- Practicing exercise at least 30 minutes a day, especially backward bending.
- Avoid late night dinner. Dinner should be taken at least one hour before sleep for the ease of digestion.<sup>[22,23]</sup>
- A diabetic patient's diet should be high on fibre, must contain milk without cream, buttermilk, fresh seasonal fruits, green vegetables, etc.

#### Effective diabetic diet for Indians

For a diabetic patient, "Per day calorie intake" should be in ranges between 1,500-1,800 calories with a proportion of 60:20:20 in between carbohydrates, fats and proteins, respectively and it should include at least two seasonal fruits and three vegetables in a diet plan.<sup>[24]</sup>

- Though, dry fruits may seem like a healthy snack but it is not a good option for diabetics, as the fructose can spike your sugar level. Go for fresh fruits rather than dry fruits for diabetes control.
- One teaspoon of methi seeds soaked overnight in 100 ml of water is very effective in controlling diabetes
- Drink tomato juice with salt and pepper every morning on an empty stomach.
- Intake of 6 almonds (soaked overnight) is also helpful in keeping a check on diabetes.
- Whole grains, oats, Bengal gram Flour, millets and other high fibre foods should be included in the meals. If one feels like consuming pasta or noodles, it should always be accompanied with vegetable/sprouts.
- Milk is the right combination of carbohydrates and proteins which helps to control blood sugar levels. Two servings of milk in a daily diet is a good option.

#### Some dietary tips to control Diabetes

- High fibre vegetables such as peas, beans, broccoli and spinach /leafy vegetables should be included in one's diet. Also, pulses with husk and sprouts are a healthy option and should be part of the diet.
- Pulses are important in the diet as their effect on blood glucose is less than that of most other carbohydrate containing foods. Vegetables rich in fibre help in lowering down the blood sugar levels and thus are healthy.
- Good fats such as Omega-3 and monounsaturated fats (MUFA) should be consumed as they are good for the body. Natural sources for these are canola oil, flax seed oil, fatty fish and nuts. These are also low in cholesterol and are trans-fat free.
- Fruits high in fibre such as papaya, apple, orange, pear and guava should be consumed. Mangoes,

bananas and grapes contain high sugar; therefore these fruits should be consumed lesser than the others.

- A large meal give rise to higher blood sugar level, therefore it is essential to take small frequent meals to prevent both higher and very low blood sugar values to keep them constant.

- Small meals in between snacks can be dhokla, fruit, high fibre cookies, butter milk, yogurt, upma/poha with vegetables etc.<sup>[24]</sup>
- A person with diabetes should follow a diet which is low in carbohydrates, high in fibre and contains adequate amounts of proteins, vitamins and minerals.
- Avoid fatty foods and sweets.<sup>[23]</sup>

#### A diet model for diabetic patient shall include<sup>[25]</sup>

<b>Early-morning</b>	Drink 1-2 glass of water, Fenugreek seed (soaked in water) a tea spoon with warm lemon juice 1 glass
<b>Breakfast</b>	Idli or oil free dosa (ragi or wheat) 2-3 with mint coriander chutney or onion chutney
<b>Mid morning</b>	Juice like bitter gourd or bottle gourd or plantain pith or veg soup -1 glass or butter milk – 1 glass
<b>Lunch</b>	Wheat phulkas (2) + chana or dhal + greens + 1 cup of hand pound rice, boiled vegetables - 1 cup
<b>Evening</b>	Herbal tea (dry ginger or coriander seeds) germinated seeds (chana, green gram, horse gram) 1 cup
<b>Early dinner</b>	Whole wheat chapatti or samba wheat kichadi 1 cup + green chutney or mixed Vegetable curry. Weekly thrice only fruits like Guava, Papaya, Apple, Jamun, Orange and Vegetable salad Plus sprouts.

#### Some effective herbs to control diabetes are

- 1- Kernel of Jamun seeds (*Syzgium cumini*); Jamun seeds are very helpful in controlling sugar and help to ease from diabetic symptoms. Take 50-60 gram of Jamun kernel, dry it and make powder of the same. Use mixture twice a day along with water.
- 2- Karela Bark, Bitter Gourd Bitter Melon (*Momordica charantia*) take karela juice twice or thrice a day (20ml). Bitter Melon has plant insulin-polypeptide-p a biochemical useful in reducing blood sugar.
- 3- Neem (*Azadirachta indica*) take 50 gram of tender neem leaves and grind it in 100ml of water, should taken in the morning for better results.
- 4- Binola seeds, Cotton seed (*Gossypium herbaceum*) reduce blood sugar due to the presence of natural antioxidants. To make cotton seed extract, take 2 gram of cotton seeds, boil these seeds in 1000 ml water until reduce 300ml. Use the extract twice a day.
- 5- Falsa Berry also used in minimizing the symptoms of Diabetes mellitus. Take 10 gram of it, soak falsa over night in 200ml of water, strain it and drink the same in the morning.
- 6- Bel Leaves (Aegle marmelos) grind some quantity of Bel leaves about 100ml of water, strain the mixture and drink extract in the morning.
- 7- Kalonji (Black cumin) also used in diabetic patients.<sup>[26]</sup>

In majority of the cases type2 diabetes can be prevent by weight loss, regular exercise, modification of diet, abstinence from smoking and consumption of limited amount of alcohol. Weight control would appear to offer the great benefit.

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