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## PRINCIPLES OF YOGIC THERAPY IN THE MANAGEMENT OF DIABETES MELLITUS

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Diabetes is a most common lifestyle disorder in modern era affecting more than 11.8% of adult population in India and 9.3% in global world. It has been a major cause of morbidity with high mortality rate due to its side complications; viz. Cardiovascular disorders, Chronic renal failure, Hearing and sight disabilities, Impotency, Respiratory syndrome etc. Inspite of its mention in ancient Ayurvedic texts & various revolutionized medical scientific research, it is being considered a major concern to treat it without a disciplined life style schedule of daily regimen, viz. Physical exercise or frisk walking or games and sports etc.; Observation of indicated and contra indicated dietary protocol; relaxation with proper sleep or meditation etc. to counteract day to day stress and hazards. (Shembhekar and Kate, 1980; Sinha et al 2018; Sami et al 2017)

The efficacy of Hathyogic practices has been well documented and recognized all over the world today in management of diabetes on the basis of scientific investigations in India and abroad since 4-5 decades along with WHO recommendations in 1980. Since the declarations of UNO for 21st June as International Yoga day in 2015, Yoga has been considered an effective tool for healthy management of lifestyle disorders.While analyzing living and the yogic protocol/intervention in the previous research studies, the criteria/logic for selecting a particular Hathyogic practices; vizAsnas, Pranayam, Mudra, Meditationetc. has been left unexplained and these practices are selected in randomized way without observation of principles of yogic therapy andtextual evidences of yoga and Ayurveda. Thus, the need of the hour is to define the yogic treatment for diabetes in context of Principles of Yogic therapy and textual evidences. This research paper deals with Yogic treatment of Diabetes on the basis of 35 years of therapeutic experience in yoga, textual evidences of Yoga and Ayurveda and in the light of defined Principles of Yogic therapy.

## **KEYWORDS:** Morbidity, Chronic renal failure, Respiratory syndrome, Hathyogic practices; viz Asanas, Pranayama, Mudra, Meditation

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#### ABSTRACT

## INTRODUCTION

Diabetes mellitus is one of the **most common metabolic disorder** and one of the **leading causes of morbidity and mortality** all over the world. India had 69.2 million people living with diabetes (8.7%) as per the 2015 data. The global prevalence of diabetes among adults over 18 years of age has risen from 4.7% in 1980 to 8.5% in 201. WHO projects that diabetes will be the 7th leading cause of death in 2030.

The following are the two main types of Diabetes Mellitus:

- 1. Type-I Diabetes mellitus— Insulin dependent diabetes mellitus (IDDM)
- 2. Type-II Diabetes mellitus— Non Insulin dependent diabetes mellitus (NIDDM)

# CAUSES OF DIABETES

Most causative factors discussed in this section do not apply to Type-1 diabetes.

- **a.** Heredity factor
- **b.** Gestational diabetes
- **c.** Low birth weight
- **d.** Diet & fat
- e. Diet &fibre
- **f.** Obesity
- **g.** Virus infection
- **h.** Sedentary lifestyle
- i. Smoking
- **j.** Effects of certain hormones
- **k.** Side effects of certain drugs
- **1.** Psychological factor
- **m.** Incorrect dietary habits

## SIGN AND SYMPTOMS OF DIABETES MELLITUS

- a. Excessive & frequent urination (polyuria)
- **b.** Excessive eating (polyphagia)
- c. Excessive Thirst (Polydipsia)
- d. Loss of Weight
- e. Weakness, Fatigue & Body-Ache
- f. Wound, Infection & Delayed Healing
- g. Altered Mental Status
- **h.** Blurred vision
- i. Intense itching all over the body, especially that of genital parts
- **j.** Sexual debility or impotence
- **k.** Pain and twitching of calf muscles
- **1.** Aching and numbress of limbs and an abnormal increase or decrease in skin sensation
- **m.** Diabetic unconsciousness (hyperglycaemic coma)
- **n.** Excretion of glucose in urine (glycosuria)

#### **YOGIC TREATMENT FOR DIABETES**

As diabetes is a life style disorder in which a man observes an erratic schedule of dietary regime and comfortable life pattern without physical & mental tension and thereby promoting maturity onset diabetes. Any therapy, whether it may be Allopathy, Ayurvedic, Homeopathy, Naturopathy etc. can't manage & cure diabetes without dietary rules & regulations as well as defined exercise schedule. Under this basic principle, yoga therapy also emphasises regulated dietary schedule & norms; and defined regular schedule of Yogic practices.

## 1. DEVELOPING CORRECT BEHAVIOURAL NORMS

In the context of positive factors of diabetes, yogic treatment emphasizes on correct behavioural norms to restrict the intensity of diabetic status and strengthening its preventive measures.

## A. DIETARY BASED BEHAVIOURAL NORMS

Excessive intake of sweetened articles in excess of one own capacity; viz. Sweets, jaggery, sugar, sugarcane juice, dates, refined flour preparations like noodles, pizza, samosa, bhatura etc. should not be taken but in restricted manner in respect of digestive capacity as well as occasionally only.

- **a.** Diabetic patient should be regular & punctual in respect of taking meals.
- **b.** Meals should be taken with calm & quite mental status having mental concentration towards food quality as well as its proper chewing.
- **c.** No water and sweetened articles should be taken just after major meals.
- **d.** Do not go to bed just after taking meals at night.
- **e.** Food intake of major meals should be during operative condition of Surya swara and in moderate quantity.
- **f.** Do not take fat based & over spicy food articles in excess.
- **g.** Avoid stress on physical & mental work and sex indulgence just after meals.
- **h.** Avoid alcohol drinking and smoking.
- **i.** One should restrict oneself to take food in excess of daily energy requirements of human body.
- **j.** One should restrict for heavy, fried &constipative food articles.
- **k.** Eating of food should not be done without proper hunger and without previous digestion of food.
- **1.** The patient should include fibrous food & vegetables, sprouted creeds, bran mixed flour of mixed cereals.

## B. OTHER IMPORTANT BEHAVIOURAL NORMS

**a.** Diabetic patient should restrict their sexual lust & excitement along with indulgence in sexual activity.

- **b.** In order to control negative emotions, the diabetics should follow the behavioural norms of Yama & Niyama for the development of correct psychological attitude as described by Maharishi Patanjali.
- **c.** One should observe the preventive measures for the development of malaria, hepatitis, jaundice, typhoid etc.
- d. Avoid excessive use of antibiotics, painkillers, steroids, and contraceptive pills.
- **e.** In order to avoid obesity, one should be moderate in diet and regular for exercise schedule.

# 2. SHATKARMIC TREATMENT

According to Ayurveda, diabetic is an endocrinal disorder caused by excessiveness & vitiation of Vata & Kaphadosha. Therefore, various Shatkarmas, which are helpful to overcome these two doshas, are to be prescribed. In addition to this factor, various shatkarmas increasing gastric fire as well as activity of pancreas are to be prescribed. In the light of these facts, the following Shatkarmas should be taught & practiced by and expert Yoga therapist:-

- A. For overcoming excessive & vitiation of Kaphadosha-
- **a.** Vamandhauti/Dandadhauti/ Vastradhauti (twice a week).
- **b.** Varisardhauti (initially twice in a Month, later on once in a month).
- c. Kapalbhati (10 minutes practice).
- B. To increase gastric fire-Nauli/Agnisarkriya (3-6 minutes daily).
- **C.** Jala Neti and Sutra Neti daily for Pranayamic preparation and balanced operation of Swaras.
- **D.** For overcoming of excessiveness & vitiation of Vatadosha-Jalabasti/Enema/Ganesh kriya/Laghooshankhprakshalana.
- E. For purification of mouth cavity-Dantamooladhauti/Jihvamooladhauti/Urdhvachakri.

# 3. ASANAS TREATMENT

Main course of asana should be taught and practiced on the basis of previously said principles:

- a. Surya Namaskaar 5-10 rounds daily.
- **b.** Asana increasing pancreatic activity for insulin synthesis and secretion and increasing gastric fire. Pawanmukta asana, Naukasana, Kurmasana, Halasana, Chakarasana, Bhujangasana, Shalabhasana, Dhanurasana, Aradhmatsyendrasana, paschimottanasana, Yogamudrasana, Ustrasana, Sputa vajrasana, Shashank asana, Mayurasana.
- **c.** Asana of Shankprakshalana Tadasana, TriyakTadaasana, Katichakra asana, Katibhujangasana, Udrakarshan asana (2-3 rounds).
- **d. Thyroid gland activity asana** Pawanmuktasana, Halasana, Dhanurasana, Bhujangasana, Ustrasana, Sarvangasana, Aradhmatsyendrasana etc.

# 4. PRANAYMIC TREATMENT

**PRINCIPLE OF PRESCRIPTION** – During yogic treatment of pranayama, these practices are being selected on the criteria of overcoming vata&kaphadoshas of diabetic state. Moreover, it is also considered that the pranayamic practices should also increase gastric fire to display indirectly the utilization of the glucose from the blood. The diabetic patient firstly undergoes the practice of correct abdominal breathing along with 1:2 in the poorka and rechka phases for a period of 3-6 days. Thereafter, the following pranayamas are being practiced for a duration of 15-20 minutes each with ideal ratio of poorka, kumbka&rechka phases as 1:4:2.

The patient should at least perform two pranayamas daily for effective results. These pranayama are:

- a. Surya bhedan Pranayama To overcome vatadosha & increasing gastric fire.
- **b.** Ujjai Pranayama To overcome kaphadosha, increasing gastric fire & balancing dhatus.
- **c. Bhastrika/nadishodan/anulom-vilomPranayama** To overcome the imbalance of tridosha as well as imbalanced operation of swara.
- **d.** Sheetli /sheetkari Pranayama In case of uncontrolled diabetic state, there is excess loss of body weight due to vitiation of pitta dosha and distraction of dhatus; to counteract this effect, the patient should be asked to practice Sheetli or Sheetkari pranayama.
- e. BhramariPranayama To counteract the negative effects of mental tension.

# 5. MUDRAS AND BANDHAS TREATMENT

The practice of bandhas & mudras also plays a vital role in the management of diabetes and these are being prescribed on the principle of increase of pancreatic activity as well as gastric fire. Therefore, the mudras which increase pranic flow towards pancreas and increase gastric fire are mentioned below: –

## Mahamudra, Mahabanda, Taragi mudra, Nabho mudra, Ashwini mudra, Jalandhar Bandha, UddianBandha, Vayu mudra, Surya mudra (in case of obese diabetics), Pran mudra.

# 6. RELAXATIVE AND MEDITATIVE TREATMENT

As the diabetes is a chronic disease resulted from important contributory factor of mental tension, therefore relaxative and meditative practices are to be practiced for effective management of diabetes. These practices help to reduce the intensity of diabetes as well as neutralizes negative physiological effects of mental tension. Therefore, the diabetics should devote 20-40 minutes time for these practices .

# **RELAXATIVE PRACTICES** – Pranadharna, Ajapajapa, Yognidra.

**MEDITATIVE PRACTICES** – Preksha meditation, Omkaar meditation, Mantra jaap based meditation, Desired deity based meditation, Transcendental meditation.

#### 7. YOGIC DIETARY TREATMENT

This step of yogic treatment plays a vital role in the management of diabetes. The previously described various behavioural norms in respect of diet are to be to practiced by the patients. Therefore, the emphasis should be given for intake of indicated articles & prohibition of contraindicated articles.

## **CONTRAINDICATED FOOD ITEMS**

Sugar, jiggery, sugarcane juice, tin packed juices with preservatives, prepared sweets like gulab jamun, barfi, jalebi etc., chocolate, coke, pastry, refined flour starchy articles, noodles, pizza, vermicellin, samosa, alootikki, spring rolls, maize, rice, potato, food based & spicy food articles like pakora, bhatura, poori, chowmein etc. nonvegetarian food like eggs, meat, fish, etc. constipative heavy articles like arbi, lady finger, cauliflower, mustard leaves, urad, rajma etc. unskimmed milk, butter, desi ghee, banana, dates, cheekku, mango, kheer, halwa, cold drinks, grapes, rabri, beet (chukundra) wine, alcohol, bidi, cigarette etc.

## **INDICATED FOOD ITEMS**

Mixed grain flour with bran; or flour of wheat + black gram+soya bean, methi, spinach, tori, tinda, bottleguard, turnip, parwal, cabbage, raddish, brinjal, carrot, jamun, lemon, amla, tomato, orange, apple, pear, orange, mausami, kinnoo, cucumber, seeds of methi, coconut water, soya bean, buttermilk, mushroom, ginger, garlic, dry ginger, turmeric, guava, papaya, muskmelon, water melon, green grams, arhar, black gram, chaulai, pomegranate, cheese, mixed grains biscuits, sugarfree tea, coffee, oat upama, mixed daliya, sproutd cereals, curd, skimmed milk, olive oil, fig etc.

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