

A SURVEY STUDY OF MENTIONED *VIHARAJA NIDANA* (PHYSICAL ACTIVITIES) IN *AYURVEDA* WITH SPECIAL REFERENCE TO DIAGNOSED DIABETES MELLITUS (TYPE II) PATIENTS

*¹Dr. Suchetta Verma and ²Dr. Pooja Arya

*¹Assistant Professor, Department of Basic Principles, MJF Ayurveda College, Chomu.

²Assistant Professor, Department of *Shalya Tantra*, Gangaputra Hospital & Research Centre, Jind.

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*Corresponding Author

Dr. Suchetta Verma

Assistant Professor,
Department of Basic
Principles, MJF Ayurveda
College, Chomu.

ABSTRACT

Introduction - In today's world, individuals are more prone to sit on a daily basis. Diabetic patients have a lower physical performance threshold than healthy individuals. Patients with DM type 2 show a lower energy expenditure, number of steps, and duration of physical activity compared to subjects without diabetes. A survey study was conducted on diagnosed patients of diabetes mellitus to assess the prevalence of physical activities in present times. **Objectives** – To survey the lifestyle causes followed by diabetes mellitus type 2 patients as factors mentioned in *Ayurveda* texts. **Materials and method** - 300 diagnosed patients of diabetes mellitus (type II) were interviewed via a questionnaire. **Result** - Maximum patients were in this study maximum patients 73.33% (220) following *alasya*. 66.67% patients (200) were following *diwa-swapna*, 65.33% patients (196) *asya-sukham*, 56% (168) *swapna-sukham*.

KEYWORDS: Diabetes mellitus, *Swapna-sukham*, *Asya-sukham*, *Diwa-swapna*.

INTRODUCTION

The modern lifestyle has a number of advantages which includes easing peoples life nobody can ignore the usefulness of modernization on our daily life, especially on how much it makes life of humans easier. On the other hand different modern life style patterns have negative effects on health physically, psychologically, and socially. According to WHO, 60 to 85% of people in the world—from both developed and developing countries lead sedentary lifestyles, making it one of the more serious yet insufficiently addressed public health

problems. Modern life style increases the risk of obesity consequently leading to diabetes, heart diseases and cancers. Global burden of increasing prevalence of diabetes created trepidation in society. Ten countries have been estimated to have the highest number of people with diabetes in 2000 and 2030, out of them, the 'top five' countries are China (109.6 million), India (69.2 million), United States of America (29.3 million), Brazil (14.3 million), Russian Federation (12.1 million). The IDF (International diabetic federation) Diabetes Atlas 2015 provides the latest information which states that Almost 415 million people have diabetes, by 2040 this will rise to 642 million and the age predisposition is mainly seen between 40 and 59 years of age. Diabetes can be defined as a clinical syndrome characterized by hyperglycemia either due to absolute or relative lack of insulin. Among them Type II diabetes mellitus is commonest type accounting for almost 90% of all diabetes. It is a fast-growing global problem with huge social, health and economic consequences. With the advent of industrialization worldwide and the staggering rise in obesity, metabolic and lifestyle disorders, diabetes has manifested as a global epidemic. Sedentary behavior refers to the tendency to sit during waking hours with low energy expenditures. The mean sitting time is estimated to be approximately 6-7 h/d in developed countries, and a decreased level of physical activity has been shown to be inversely associated with increased sitting time.^[1] In today's world, individuals are more prone to sit on a daily basis. Diabetic patients have a lower physical performance threshold than healthy individuals. Patients with DM type 2 show a lower energy expenditure, number of steps, and duration of physical activity compared to subjects without diabetes.^[2] The purpose of this survey is to highlight the effects of daily physical activity on health in type 2 diabetic patients and to further suggest a strategy for the treatment of DM type 2 by changing the amount of daily physical activity a patient performs. Same thing mentioned in our is texts that the chief *viharaja nidana*^[3] (etiological factor) of *Prameha* has been especially as *asyasukham* (sedentary life), *swapnasukham* (enjoying excessive sleep), *alasya*(laziness etc). Beacuse of less activities of *Pramehi med dhatu* and *kapha dosha* get vitiated due to similar properties leads to advance stage of *Prameha*.

Aims and Objectives of Study

To study the role of *viharaja nidana* mentioned in *Ayurveda* texts in diagnosed patients of diabetes mellitus (type II).

Materials

- Review of *ayurvediya* literature from *ayurvediya* classics including relevant commentaries.
- Relevant modern literature were consulted for comparative study and drawing inferences and justification.
- Other print media, online information, journals, magazines etc. were searched for similar matter and were be incorporated according to the need of the topic.

Methods

The study was carried out in two steps.

1. A questionnaire was developed related to physical habits mentioned in classical texts and used contemporarily as well.
2. 300 subjects who was reporting to the Laboratory/ OPD/ IPD of hospital of NIA Jaipur were with the help of framed questionnaire.

Table no. 1: Lifestyle Causes (*Viharaja Nidana*).

<i>Viharaja Nidana</i>	Ch. ^[4]	Su. ^[5]	Present Habits
<i>Asya Sukham</i>	+	-	Sedentary life
<i>Swapna Sukham</i>	+	-	Excessive Sleeping
<i>Diwaswapna</i>	-	+	Sleeping during the day
<i>Avyayayama</i>	-	+	No physical activity
<i>Alasya</i>	-	+	Laziness
<i>Ratri Jagrana</i>	+	-	Night awakers

Table No. 2: Properties of *viharaja nidana* that cause *Prameha*.

<i>Vihara</i>	<i>Srotas involved</i>	<i>Dusti</i>
<i>Swapnasukha</i>	<i>Medovaha</i>	<i>Shleshma Vardhana</i>
<i>Asya Sukha</i>	<i>Medovaha</i>	<i>Shleshma Vardhana</i>
<i>Diwa Swapna</i>	<i>Medovaha</i>	<i>Shleshma Vardhana</i>
<i>Tyakta Chinta</i>	<i>Medovaha</i>	<i>Kapha and Medas</i>
<i>Mruja Varjana</i>	<i>Medovaha</i>	<i>Kapha and Medas</i>
<i>Tyakta Vyayama</i>	<i>Medovaha</i>	<i>Kapha and Medas</i>
<i>Alasya Prasakta</i>	<i>Medovaha</i>	<i>Kapha</i>
Failure to perform <i>Samshodhana</i> therapy.	<i>Bahudosha Awastha</i>	<i>Tridosha</i>

***Apathaya Vihara* (Lifestyle tendencies)**

Inactivity, idle sitting (*Ashayasukham*), Excessive amount of sleep even during day time (*Swapnasukham*), avoidance of physical exercise (*Karmadveshi*), avoidance of body cleaning (*Snadveshi*), avoidance of *Shodhan Karma* (bio-purification of body) and all regimens

which increases *Kapha*, *Meda* and *Mutra* which are the etiological factors of *Prameha*.^[6]
The detailed description of the above factors causing *Prameha* is given below.

Few of the principle activities are described below:

Ashayasukham - Idle sitting/excessive sitting, avoiding physical exercise, taking excessive rest, enjoying excessive use of technology and gadgets, regular long sitting, watching TV and movie for a prolonged time and suppression of natural urges. The physical activity leads to muscle contraction that helps in the absorption of sugar by the cells regardless of the level of insulin resistance. But lack of physical exercise makes a person more dependent upon insulin for the absorption of sugar.

Swapnasukham - Excessive sleeping even during daytime. During sleep calories expenditure may be about 1 kcal/minute. If a person increase sedentary lifestyle or increase his calorie intake by only 200 kcal/day (10% increase) after one year he will accumulate 73000 extra kcal. A pound of adipose tissue (450 gm) which is 90% triglycerides by mass, has a calorie equivalent of about 3500 kcal.

Snana Dveshi

During bathing person do some exercise in rubbing and cleaning process. When a person does not take bath, the energy is conserved and the unutilized calories in the form of fat gets accumulated. The person becomes susceptible to infection. Thus these vitiate *Kapha Dosha* and *Medodhatu*. All the *Apathya Vihara* are responsible for the increase of *Kapha* and *Meda*, which are prerequisite factors of *Prameha*.

OBSERVATION AND RESULTS

- **Age**-Maximum no. of patients were observed in 7th decade (60-70 years) 30.67% followed by 24% in 6th decade(50-60 years), 18.67% in 4th decade(30-40 years), 14.66% in 5th decade and 6.67% in 3rd decade while least patients 5.33% in 8th decade is observed showing peak incidence of type 2 diabetes in 7th decade.
- **Sex**- 64% patients were male (192) while 36% were female (108).
- **Socioeconomic Status** –This study reveals that maximum no. of patients were of middle class 184 (61.33%) followed by lower class 64 (21.33%) and higher class 52 (17.33%).

- **General Viharaja Nidana of Prameha in 300 patients**

Sr. No.	<i>viharaja Nidana</i>	No. of patients	%
1	<i>Asya Sukham</i>	196	65.33
2	<i>Swapna Sukham</i>	168	56
3	<i>Diwaswapna</i>	200	66.67
4	<i>Alasya</i>	220	73.33

DISCUSSION

Maximum patients are using *ashaya-sukham* and *swapna-sukham* means idle sitting/excessive sitting, avoiding physical exercise, taking excessive rest, enjoying excessive use of technology and gadgets, regular long sitting, watching TV and movie for a prolonged time and suppression of natural urges. The physical activity leads to muscle contraction that helps in the absorption of sugar by the cells regardless of the level of insulin resistance. But lack of physical exercise makes a person more dependent upon insulin for the absorption of sugar. Maximum patients showing laziness (*alasya*) which increases *kapha*, *meda* and *mutra* which are the etiological factors of *Prameha*.^[7] The patients are using *diwa-swapna* i.e. excessive sleeping even during daytime. During sleep calories expenditure may be about 1 kcal/minute. If a person increase sedentary lifestyle or increase his calorie intake by only 200 kcal/day (10% increases) after one year he will accumulate 73000 extra kcal.

Even *Acharya Charaka* described various physical exercises, forceful massage, and baths and showering from perforated water of *khaskhas* grass, *cinnamon*, *cardamom*, eagle wood, sandal wood, and *tagar*.^[8] *Acharya Sushruta* said that *Pramehi* patient should have exercise, *niyuddha* (*kusti*), playing sports, riding on elephant and horse, walking, and practice of exercise instruments. The patient who has lack of money should go on walk of one hundred yojans (800-900 miles approx. in his life time), without making use of an umbrella and foot wear, adhering to the way of life of an ascetic or dig a source of water by himself or wander along with herd of cows subsisting on the dung, urine etc. of the cows.^[9]

CONCLUSION

Although patients with DM type 2 engage in daily physical activity may be difficult and patients don't know the effects of *viharaja nidana sevana* and uses them continuously along with medication of *Prameha* & not get stat is factory results of medicine. So these *nidana* are very usefule and should have taken by patients of DM type 2.

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