

Lifestyle and dietary pattern of diabetic patients

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■ **ABSTRACT** : Diabetes mellitus is a chronic metabolic disorder that prevents the body to utilize glucose completely or partially. It is characterized by raised glucose concentration in the blood and alterations in carbohydrate, protein and fat metabolism. The prevalence of diabetes in India is reaching alarming proportions. The present study was design to access the dietary pattern and life style behaviour of diabetic patients. Total 300 diabetes type -2 patients from five hospitals of Ranchi districts were purposively selected. Maximum 51.33 per cent reported diet control is the prime factor for diabetic patients. Diet is the single most important factor in the successful treatment of diabetes. In spite of all advance medical treatment diet has maintained its supremacy. Despite frequent intake of meals continual loss of weight is the symptom of diabetes. Forty-seven per cent families had strong hereditary tendency to diabetes. The family plays an important role both in health and diseases in the prevention and treatment of individual illness. Health care is the primary necessity of the society.

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Diabetes mellitus is one of the most common metabolic disorders affecting human. It is estimated that by the year 2025, there will be 57 million persons with diabetes in India. Environmental factors such as diet, obesity and sedentary habits increase the risk for diabetes. Prevalence of diabetes is higher in individuals with sedentary habits (Bamji *et al.*, 2003).

Diabetes occurs at a young age as well as in the later years of life. The Juvenile variety, relatively severe but uncommon in India occurs in children and young adults below the age of 30. This kind of diabetes is insulin dependent and cannot be controlled with oral drugs. The maturity onset diabetes occurs after the age of 35 (Thapar, 1998). Diabetes is a disorder of carbohydrate

metabolism disorder characterized by high blood sugar level and high level of sugar in urine. Once it occurs cannot be cured but can be kept well under control and with proper care (Joshi, 1992). Type 1 diabetes is also called Juvenile diabetes as it is diagnosed in young adults or children. It is insulin dependent diabetes because the body completely stops producing insulin. Type 2 diabetes occurs in adults and is more common in obese people. This type-2 diabetes can be treated with diet, exercise and oral Medication (Begum, 1997).

Insulin dependent diabetes also known as Juvenile diabetes occurs during early childhood and adolescence non-insulin dependent diabetes seen in middle aged adults and older individuals is more common than Type-1. It

develops slowly and gradually (Sethi, 2012). Diabetes Mellitus is characterized by chronic hyperglycemia and disturbance of carbohydrates, fat and protein metabolism associated with an absolute or relative deficiency of insulin secretion or action (Goyal and Gupta, 2012). The number of people affected by diabetes is increasing each day. Sedentary life plays an important role in the origin of diabetes. The incidence of diabetes is greater in urban areas than rural areas.

Therefore, the present investigation was designed to assess the life style, causes and various dietary patterns of selected diabetic patients in Jharkhand and to minimize the health problem.

■ RESEARCH METHODS

This present study was conducted in selected hospitals such as Raj hospital (60), Sewa Sadan (60), Gurunank hospital (60), Rims (60) and Medanta (60) of Ranchi district. Total 300 diabetic patients were purposively selected. The information regarding diabetes of the diabetic patients were collected through a specially designed scheduled. The collected data were coded, tabulated and analyzed for drawing the relevant interferences.

■ RESEARCH FINDINGS AND DISCUSSION

As diabetes develops, the person complains of excessive thirst, increase frequency and amount of urine and feels very hungry. Young patients lose weight, while older patients may be over weight (Mudambi and Raja Gopal, 2015).

In case of sign and symptoms of diabetes maximum 52 per cent patients complain frequent urination, 50 per cent feels thirst, 14 per cent eye problem, 9 per cent weakness, body pain and only 2.33 per cent suffering from infection (Table 1). Common symptoms of diabetes are increased thirst, increased frequency of urination especially at night, excessive tiredness, weight loss, blurred vision; cuts are slow to heal etc.

Diet plays an important role in controlling diabetes. Decreased physical activity, over nutrition and nutrition transitions caused by changes in life style contribute to the increasing incidence of chronic metabolic diseases as well as death related to them (Mayeed, 2018). Table 2 shows that 40.33 per cent diabetic patients were doing high level of physical activity followed by 38.67 per cent normal level and 21 per cent with low level activity.

Table 1 : Sign and symptoms of diabetes

Characteristics	Number	Per cent
Excessive urination	152	52.67
Excess Thirst	150	50.00
Eye problem	42	14.00
Weakness	29	9.67
Faint	25	8.33
Itching	08	2.67
Vomiting	16	5.33
Swelling	09	3.00
Infection	07	2.33
Body pain	27	9.00
Paralysis in leg	02	0.67
Breathing problem	13	4.33

Diabetes is an outcome of leading a sedentary life and eating processed foods. High calorie food intake, lack of exercise and physical inactivity leads to diabetes. A diabetes person must do adequate exercise, walking, yoga, meditation along with proper diet control. Stress occurs in every one's life. Meditation is very important for diabetic patients. Physical exercise is the second important mode of treatment in diabetes. Diabetic patient can opt for any light exercise like walking, jogging, swimming, cycling, gardening etc. Regularity in exercise is of paramount importance (Gala *et al.*, 2005).

Table 2: Life style of diabetic patients

Life style	Number	Per cent
Sedentary	63	21.00
Moderate	116	38.67
Heavy	121	40.33
Favorite activity		
Playing outdoor game	14	4.67
Playing indoor game	9	3.00
Watching T.V	182	60.67
Swimming	4	1.33
Exercise	149	49.67
Yoga	103	34.33
Gossip	28	9.33
Wandering	19	6.33
Get up time		
5-6 AM	197	65.67
6-7 AM	64	21.33
7-8 AM	39	13.00
Sleeping time		
8-9 PM	54	18.00
9-10 PM	106	35.33
10-11 PM	140	46.67

Table 3 : Family history and physical conditions of diabetic patients

Family History	Number	Per cent
Present	142	47.33
Ailments		
Heart disease	79	26.33
Kidney disorders	56	18.67
Eyes complications	72	24
Nerve complication	56	18.67
Infections	116	38.67
Gangrene of foot	58	19.33
Digestive disorder	84	28
High blood pressure	127	42.33
Hormonal problem	40	13.33
Low blood pressure	75	25.00

Regarding their favorite activity most of them 60.67 per cent reported to watch TV followed by exercise 49.67 per cent, yoga 34.33 per cent and only 1.33 per cent interested in swimming. Most of them (65.67 %) were early riser at 5-6 am and 46.67 per cent reported their sleeping time at 10-11 pm followed by 35.33 per cent at 9-10 pm and only 18 per cent at 8-9 pm (Table 2). Diabetes may be inherited from parents, grandparents and blood relatives. Majority 52.67 per cent had no family history; however 47.33 per cent reported family history of diabetes. Almost half of them had strong hereditary tendency to diabetes. Diabetes is a leading cause of blindness amputation and kidney failure. It is a chronic disease and a slow killer- killing people by damaging the kidney, causing heart disease, coma or by gangrene formation (Keith, 2015).

Maximum respondents 42.33 were suffering from high blood pressure followed by 38.67 per cent infections, 28 per cent digestive disorder, 26.33 per cent heart disease, 25 per cent low blood sugar, 24 per cent eye

Table 4 : Awareness of diabetic patients

Awareness	Number	Per cent
Consult dietician	115	38.33
Dietary habits		
Vegetarian	102	34
Non - Vegetarian	198	66
To check up		
Sugar level		
1 month	98	32.67
2-3 month	29	9.67
4-6 month	13	4.33
Yearly	30	10.00
Frequently	130	43.33
Beneficial for diabetes		
Diet	154	51.33
Exercise	74	24.67
Yoga	9	3.00

complications and only 13.33 per cent hormonal problem (Table 3). Good diet is needed to sustain good health. A balanced diet yields daily nutrients in the proper amounts and proportion by the body. Both doctor and dietician have a role in the dietary management of diabetes. As diet is the corner stone in the management of diabetes mellitus 38.33 per cent consulted dieticians about their diet. Sixty six per cent patients were non- vegetarians and 34 per cent vegetarian. Maximum 51.33 per cent reported that diet control in the prime factor for diabetes.

In case of food consumption pattern 250 respondents reported daily consumer of wheat followed by 237 leafy vegetables, 222 roots and tubers, 221 Rice, 197 citrus fruits, 169 milk and milk products, 160 pulse, 130 vegetables and 123 other fruits. In case of fruits 75 respondents never take fruits followed by vegetables 45, rice 31, citrus fruits 29 and roots and tubers only 10 while

Table 5 : Food consumption pattern of diabetic patients

Food stuff	Never	Daily	Twice	Weekly	Monthly	Occasionally
Rice	31	221	-	25	-	23
Wheat	25	250	25	-	-	-
Maize	20	-	-	22	226	32
Pulse	15	160	40	30	30	25
Vegetables	45	130	-	75	40	10
Roots and tubers	10	222	10	15	5	38
Leafy vegetables	20	237	-	15	-	28
Citrus fruits	29	197	-	48	10	16
Other fruits	75	123	23	25	35	19
Milk and milk products	20	169	42	32	25	12

majority (226) respondents are consuming maize monthly. Carter *et al.* (2010) reported that greater leafy-green vegetables consumption was correlated to 14 per cent decrease in risk of Type 2 diabetes. Vegetables play a remarkable role in human nutrition and health since they charge dietary fibre, phytochemicals, vitamins, and minerals Dias and Ryder (2011). Vegetable intake has been highly correlated with improved gastrointestinal health, and reduced risk of heart attack, some types of cancer and chronic ailments such as diabetes (Dias, 2012). Nanri *et al.* (2010) reported that elevated intake of white rice was associated with an increased risk of T2DM.

Conclusion:

Today, diabetes mellitus is a very well known and common disease. This disease can be completely controlled by life style management, education and changes in diet habits. It is caused by ignorance and casual attitude about health. Studies on diabetes help to create awareness to improve the life- styles of the people struggling with this dreaded disease every day. Absence of adequate nutrients can cause certain diseases. Deficiencies, excesses and imbalance in the diet can produce negative impacts on health.

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