



Category: Miscellaneous

# Role of Vegetarian Diet in preventing diabetes in population practicing sedentary lifestyle: A case study in Eastern region of India

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## Abstract

India in twenty-first century has seen a rapid transformation in dietary convention, with immoderate intake of calorie-rich food along with a sedentary lifestyle. The prevalence of type 2 diabetes (T2D) is quite alarming and observed to be 1.6 to 2 times as high among non-vegetarians (NV) compared to vegetarians. Dietary factors and physical activity are two major factors in T2D predisposition and disease management. Recent studies have shown that physical activity and vegetarian diets improve insulin sensitivity and glycemic control. The current investigation was carried out to observe the effect of diet in two Indian communities practicing sedentary lifestyle through a retrospective cross-sectional study. Depending on the lacto-vegetarian diet (LV) and non-vegetarian dietary patterns in individuals, the study population was divided into two groups. Two Indian communities namely Jain and Marwari as LV and Odia as NV those are residing in Bhubaneswar, Odisha were considered for this study. The survey was conducted from January 2015 to April 2015. A total of 403 participants (253 male and 150 female) aged 30-80 years were enrolled in the study. Individuals undergoing medication for any known diseases, such as diabetes mellitus, rheumatoid arthritis, etc. including pregnant women or those with polycystic ovarian syndrome were also excluded from the study. Fasting blood samples were analyzed for blood sugar, glycated hemoglobin (HbA1C), and lipid profile. Body mass index (BMI) and waist circumference (WC) measurements were also recorded. The incidence of T2D was lower in lacto-vegetarian (1.7%) than in NV group (5.3%) despite similar lipid profiles and BMI/WC between these two groups. Fasting blood sugar (FBS) was positively correlated with LDL and VLDL levels and negatively correlated with HDL, only in lacto-vegetarian group. The study ignited that although the sedentary lifestyle and fat-rich diet of the LV group had an effect on individual's overall lipid profile and BMI/WC, the LV diet practiced has beneficial effects on blood sugar levels/T2D. The study suggests that a shift to an LV diet may be helpful for those leading an inactive lifestyle by compulsion.

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