

## Dietary and lifestyle modification in the prevention of diabetes mellitus

Sonali Tripathy

India

**Introduction:** Diabetes mellitus (DM) is a disease caused by deficiency or diminished effectiveness of endogenous insulin. It is characterized by hyperglycemia, deranged metabolism and squealed predominantly affecting the vasculature. The term diabetes mellitus includes several different metabolic disorders that all if left untreated, result in abnormally high concentrations of a sugar called glucose in the blood. Diabetes mellitus type1 result when the pancreas no longer produces significant amounts of the hormone insulin, usually owing to the autoimmune destruction of the insulin-producing beta cells of the pancreas. Diabetes mellitus type2, in contrast, is now thought to result from autoimmune attacks on the pancreas and/or insulin resistance. Other forms of diabetes mellitus, such as the various forms of maturity-onset diabetes of the young, may represent some combination of insufficient insulin production and insulin resistance. Diabetes management is to prevent or treat the many complications that can result from the disease itself and from its treatment.

**Objectives:** The overall objective of this study was to evaluate and provide evidence and recommendations on diet and lifestyle in the prevention of diabetes. To induce dietary changes for diabetic glycemic and lipid control, without weight gain. The treatment goals are related to effective control of blood glucose, blood pressure, and lipids and to minimize the risk of long-term consequences associatedwithdiabetes.

**Methods:** This is a crosssectional study with 100 Diabetic people. The study carried out by investigating patient???'s background, medical past history, physical examination,

nutritional and lifestyle assessment, physical activity assessment, medical and nutritional problems associated. This study was on pure interview method of one to one.

**Result:** An increased risk for developing diabetes is associated with Overweight and obesity; abdominal obesity; physical inactivity; and maternal diabetes. It is probable that a high intake of saturated fats and intrauterine growth retardation also contribute to an increased risk, while nonstarch polysaccharides are likely to be associated with a decreased risk. From existing evidence, it is also possible that omega-3 fatty acids, low glycaemic index foods, and exclusive breastfeeding may play a protective role, and that total fat intake and Trans fatty acids may contribute to the risk. A major set of patients with more than 7 to 10years Diabetic period are prone to have a secondary complication like Nephropathy, Neuropathy, Retinopathy, Cardiac issue, Foot complication, Gastroparesis, HTN, DKA, Skin complication and stroke. From the study 70-80% patients are having HTN, 25-30%are having Retinopathy,20-25% are having a cardiac issue,10-15% are having Nephropathy. In the above study, some patients are there, who are having a 2-3 complication at the time. Conclusions: Based on the strength of available evidence regarding diet and lifestyle in the prevention of diabetes, it is recommended that a normal weight status in the lower BMI range (BMI 21???'23) and regular physical activity be maintained throughout adulthood; abdominal obesity be prevented; and saturated fat intake be less than 7% of the total energy intake. So, finally, a patient can increase his or her lifespan by adding a balanced diet, physical activity and medication as per the doctor.