

DIABETES AND CARDIOVASCULAR DISEASE: HOW THE WEST CAN WIN?

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Increased intake of saturated fats and cholesterol have been implicated not only in the pathogenesis of atheromatous cardiovascular diseases (CVD) but also in diabetes. Lowered plasma glucose levels and low incidence of CVD in American and Indian vegetarians and Eskimos suggested that diet could be important not only in the development of these problems but also in their prevention. Since polyunsaturated fats and complex carbohydrates have been successfully used to control diabetes and CVD, we aimed to study (for 1-10 years) the role of cardiovascular protective (CVP) diet in 100 patients of noninsulin dependent diabetes in relation to development and prevention of CV manifestations among them. The age ranged in between 30-50 years and majority (76 out of 100) were males. Participants were randomly divided into two groups after a run period of one week on CVP diet. Gr. A included 52 patients who were given CVP diet and Gr. B included 48 patients on usual diet. Age, sex, risk factors, drug therapy and cardiovascular complications were comparable in both the groups during admission to the study. After one year, not only there was a decrease in the proportion of patients with hypercholesterolemia, hypertriglyceridemia, hyperglycemia, hypomagnesemia, hypokalemia and hyponatremia in group A patients but also their mean serum levels of cholesterol (238.3 SD 36.7, 142-155 mg/dl), triglyceride (126.0 SD 13.0, 82-152 mg/dl), fasting blood sugar (112.0 SD 7.8, 83-158 mg/dl) were higher compared to cholesterol (262.8 SD 41.8, 151-286 mg/dl), triglyceride (136.0 SD 4.2, 90-165 mg/dl) and glucose (27.8 SD 8.6, 90-175 mg/dl) levels among group B patients. These changes were consistent with double the increase in intake of complex carbohydrates, polyunsaturated fats, vitamin C and other micronutrients and decrease in saturated fats and cholesterol in group A patients compared to group B. There was a notable decrease in CV complications and their manifestations including angina, reinfarction, fresh infarction, stroke, hypertension, sudden deaths, cardiomyopathy, left ventricular dysfunction, unexplained tachycardia, postural hypotension among group A patients after 1 and 10 (mean 8.5) years compared to group B patients. It is possible that CVP diet in the form of increased fruits, vegetables, cereals and polyunsaturated fats could have given protection to group A patients from CVD and their complications among them. It is suggested that a change in diet in the form of total food rather than cholesterol or refined carbohydrates alone should be aimed for prevention of these complications because which of the nutrients is actually playing a protective role is still exactly undetermined. This is particularly important for western world and also for metropolitan cities of India where other environmental factors such as stress and physical inactivity are difficult to alter.