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Coconut fat intake and cardiovascular disease status –a cross sectional study

J Gooneratne[1*], D U Rajawardana[1], L W S Munasinghe[1], C L Piyasena[2]
[1]*Food Technology Division, Industrial Technology Institute, 363,Bauddhaloka Mawatha, Colombo 07*
[2] *Department of Nutrition, Medical Research Institute, Colombo 08*

The high saturated fat content in coconut has been positively implicated with high prevalence of cardio vascular disease (CVD). Current evidence shows that the chain length of fatty acids and types of fat have an important role in determining CVD risk. This cross sectional study examined the CVD risk factors (dietary and lifestyle) of a community consuming coconut as the major source of fat in their diet. Healthy 957 (males-340, females-617) volunteers aged 18 to 65 years were recruited from Gampaha district. The socio-demographic data, family history of disease and lifestyle factors were assessed using a pre-tested questionnaire. Anthropometry and arterial blood pressure were measured and Lipid profiles were determined. The nutrient intake was measured by three-day dietary records. The subjects were grouped as high fat group (>16 % energy from coconut fat (CF) daily) and low fat group (≤ 16 % energy from CF). Associations between selected CVD risk factors and CF intake (as a dichotomous variable) were investigated. Associations were examined in a multivariate model adjusting for potential confounding variables (smoking, alcohol consumption, elevated blood pressure, BMI above cut-off levels). Average age of the population was 42.7± 11.9 years. Mean total cholesterol levels (TC) (p=0.003), Low-density lipoproteins (LDL) (p=0.001) and total cholesterol to High-density lipoprotein (HDL) ratios (p=0.017) were significantly higher among females compared with males. The mean CF intake of the population was 32.5± 14.4 g/day, which represents 68.3 ± 16.6 % and 15.9± 6.4 % of the total fat and total energy intake respectively. There was no significant difference (p=0.001 and p=0.005) in CF intake between males and females. CF intake was not significantly associated with anthropometric risk factors (BMI > 25 kgm^{-2}, waist to hip ratio; males>0.9 females >0.85), lipid profile (TC> 200 mg/dl, HDL < 40 mg/dl, LDL>150 mg/dl,Triglycerides >160 mg/dl) and blood sugar levels (>110 mg/dl) in univariate models, when applied to the total population. Similar observations were made in multivariate models adjusting for potential confounding factors. Consumption of CF an energy level of 16.4 % had no risk on the lipid profile of the study population.

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*Jaanaki@iti.lk Tel: 011-2693807 Ext. 225