

ICCN Poster Presentations

Nutrition and cardiovascular disease

Calcium status among pregnant women

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The dietary intake of women when they conceive is considered to be important to the outcome of the pregnancy (as well as intake of certain nutrients). Each individual nutrient has certain specific effect on the fetal outcome if it is not taken at optimal level. During pregnancy, a mother will experience various physiological and psychological changes. These changes will warrant additional intake of certain nutrients, one of which is calcium. The main objective of this study was to determine the calcium status among pregnant women in rural areas of Malaysia. A total 60 women of Malay, Chinese and Indian ethnic groups agreed to participate in the study. The data on demographic characteristics of the respondents, knowledge on nutrition, 24 hour dietary intake and food frequency were collected by using a set of pretested questionnaires. Three milliliters of blood were collected from each respondent to determine serum calcium. The calcium in the blood was analysed by using AAS. Results on the serum calcium showed that 43.75 % of the respondents had normal, 37.5% had lower and 18.75 % had high serum calcium in their blood. However from the analysis of 24 hour dietary recall, it was found that calcium intake from the diet in 92% of the respondents was less than recommended amount according to RDA. The sources of calcium intake as determined by using food frequency questionnaire were mainly from leafy vegetables, seafoods and powdered milk. One of the demographic data taken from the respondents was level of blood pressure. Many studies found that intake of calcium as recommended in RDA will prevent incidence of pregnancy-induced hypertension among pregnant women. Analysis of the data using Pearson correlation between level of blood pressure and serum calcium found a negative correlation between the two variables, however it was not significant ($r = -0.1091$, $p = 0.552$). Since majority of respondents had less than recommended amount of calcium intake, the nutrition education on pregnant mothers could be further enhanced in this area.

Impact of incorporating soya fibre and processed soyabean flours on the glycaemic index of parantha

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The glycaemic index (GI) of foods has important implications for the prevention and treatment of the major causes of morbidity and mortality including diabetes mellitus, cardiovascular disease and obesity. This study was conducted to estimate the GI of an Indian snack food 'parantha' (a kind of unleavened bread) made from unrefined wheat flour. Its three variations containing soya fibre, roasted soyabean flour and defatted soyflour (approximately 20% level) respectively and having 50g available carbohydrate were also tested. Five healthy, normal weight females aged 21-23 years comprised the sample. Glucose was used as a reference food. The test meals were given within 4 weeks of reference food administration, with at least 4 days interval between each test food. The test and reference food were served at a fixed time in the morning, after a 12-h overnight fast. Blood glucose was estimated at 0, 30, 60 and 120 min after eating, using Arkaray blood glucose test meter II. The plain parantha had the highest GI (87.03%). Soya fibre was most potent in lowering GI, the value being 55.03%. Roasted soyabean flour and defatted soyflour containing paranthas had a GI of 75.63% and 65.67% respectively. There was a significant difference among the four mean GI values. All the paranthas had good acceptability as judged by a semi-trained panel using 9 point hedonic scale and 5 point rating scale.