

## Free Paper - 9

### ABSTRACT

**Title:** "Do traditional foods help to decrease the glycaemic index?"  
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**Objective** Determination of the glycaemic index (GI) of some foods of Jaffna such as cooked white rice ('Bg- 11-11'), brown rice ('At- 402'), parboiled rice ('Mottaikarupan'), 'Pittu', 'string hopper', frequently used tubers such as boiled potato (*Solanum tuberosum*) and cassava (*Manihot esculenta*) and legumes such as boiled green gram (*Vigna radiata*) and chick pea (*Cicer arietinum*).

**Methods** Healthy volunteers (22 Nos.) of 24.62 ( $\pm 1.43$ ) years, 63.42 ( $\pm 10.50$ ) kg body weight, 1.70 ( $\pm 0.07$ ) m height and 21.90 ( $\pm 2.75$ ) kg m<sup>-2</sup> body mass index were selected with their written consent. After overnight fasting, 75g glucose and each test food containing 75g digestible carbohydrate were administered at different instances and blood glucose levels were measured half hourly for two hours. The GI values were calculated and analyzed by Randomized Complete Block Design using SAS analytical package.

**Results** The mean GI values of cooked white rice, brown rice, parboiled rice, 'Pittu', 'string hopper' (made of wheat flour and rice flour 2:1 ratio), potato, cassava, green gram and chick pea were 66.61 ( $\pm 9.86$ ), 60.24 ( $\pm 8.16$ ), 55.97 ( $\pm 6.01$ ), 43.74 ( $\pm 9.09$ ), 50.01 ( $\pm 7.06$ ), 65.16 ( $\pm 6.56$ ), 78.67 ( $\pm 7.30$ ), 31.43 ( $\pm 6.96$ ) and 33.27 ( $\pm 6.23$ ) % respectively. The GI values of cooked white rice differed significantly ( $P < 0.05$ ) from brown rice and parboiled rice. The GI values of cooked brown rice did not differ significantly ( $P < 0.05$ ) from parboiled rice. The GI values of 'Pittu' differed significantly ( $P < 0.05$ ) from 'string hopper'. The GI values of potato differed significantly ( $P < 0.05$ ) from cassava. The GI value of green gram did not differ significantly ( $P > 0.05$ ) from chick pea. The GI values

of green gram and chick pea differed significantly ( $P < 0.05$ ) from cooked white rice, brown rice, parboiled rice, 'Pittu', 'string hopper', potato and cassava.

**Conclusion** 'Pittu', 'string hopper' green gram and chick pea are low GI diets ( $GI < 55$ ). The cooked brown rice, parboiled rice and boiled potato are intermediate GI diets ( $GI 55-70$ ). Cassava is a high GI diet ( $GI > 70$ ). Low GI diets are good for diabetic and coronary heart disease patients. When foods are prescribed to diabetic patients, precaution has to be taken. However recommendation of the foods for the diabetic patients shall be made by analyzing the glycaemic index, glycaemic load and energy content of the food.

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