

## **Glycaemic index is altered with the mixed meals**

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### **Objectives**

The aim of this study is to evaluate the GI values of black gram based mixed meals commonly consumed in Sri Lanka.

*Methods:* 10 Healthy volunteers with the mean age, weight, and height and body mass index of the 20.05 ( $\pm 0.92$ ) years, 54.70 ( $\pm 5.74$ ) kg, 1.63 ( $\pm 0.08$ ) m and 20.73 ( $\pm 2.63$ ) kgm<sup>2</sup> respectively were selected with their informed 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 'dhosai'/'idly' either with 'sambol' or 'sambol' & plantain ('itharai') or 'sampar' or 'sampar' & plantain or 'sambol' & 'sampar' or 'sambol', 'sampar' & plantain were 63.93 ( $\pm 7.62$ ), 60.17 ( $\pm 3.58$ ), 71.90 ( $\pm 4.73$ ), 68.57 ( $\pm 4.18$ ), 65.63 ( $\pm 3.46$ ), 63.04 ( $\pm 5.05$ ), 56.85 ( $\pm 6.26$ ), 51.10 ( $\pm 6.57$ ), 70.32 ( $\pm 8.22$ ), 67.45 ( $\pm 7.87$ ), 63.99 ( $\pm 3.29$ ) and 61.30 ( $\pm 3.09$ ) % respectively. When plantain was given with 'dhosai' and 'idly', the GI values were decreased. When these foods were eaten with 'sampar', the GI values were increased. The GI values were increased when the foods were consumed with 'sampar' alone or 'sampar' and 'sambol'. The GI values of 'dhosai' with mixed meals differed significantly ( $P < 0.05$ ) from 'idly' with mixed meals. The GI values of 'dhosai'/'idly' either with 'sambol' or 'sampar' or 'sambol' & 'sampar' differed significantly ( $P < 0.05$ ) from those mixed meals with plantain ('itharai').

### **Conclusion**

'Idly' with 'sambol' & plantain is lower GI food. The 'dhosai' either with 'sambol' or 'sambol' & plantain or 'sampar' & plantain or 'sambol' & 'sampar' or 'sambol', 'sampar' & plantain and 'idly' either with 'sambol' or 'sampar' & plantain or 'sambol' & 'sampar' or 'sambol', 'sampar' & plantain are medium GI foods. The 'dhosai' either with 'sampar' and 'idly' with 'sampar' are high GI foods. 'Dhosai' is inferior to 'idly'. When consuming the basic foods with different slide dishes, the GI values would be altered. Therefore, when dietary advices are given to diabetic and coronary heart disease patients, not only the basic foods have to be considered but also the slide dishes to be consumed.

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