

## ABSTRACT

**Do protein, fat and dietary fibre content of cooked rice affect the glycaemic index in different rice varieties?**

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Rice provides carbohydrates, an essential source of energy in addition to about 40% of protein requirement and other nutrients for Sri Lankans. Many different rice varieties are being used by Sri Lankans as the staple. The objective of the study was to study the effect of dietary fibre, fat and protein content of commonly consumed varieties of rice on the glycaemic response and the glycaemic index following consumption.

Standard methods were used to determine the protein, fat and dietary fibre and GI. Eight commonly consumed [(basmati 04), parboiled white (01), *keeri* samba (01), white raw (01) and red raw (01)] rice were used for the above determinations. Moisture content of cooked rice varied from 58-72%. Protein content, total dietary fibre and fat content in a 50g digestible carbohydrate portion ranged between 3.4-6.7g, 1.6-7.0 g and 0.8-3.1g. Parboiled white rice variety elicited low GI (40), *keeri* samba medium GI (66), red and white raw rice high GI (80 & 81), white basmati varieties high (73), medium (64), low (54) GI and red basmati high (73) GI. Non significant negative correlation was observed with insoluble dietary fibre and protein contents of the rice with GI. Fat and total fibre inherently present in different rice in the portion given to determine GI were not capable of contributing to decrease the GI. Thus indicating the components added to make a meal (curries or other accompaniments) and the physico-chemical characteristics of starch affect the GI of foods than the inherent nutrients present in rice. However, moisture content plays a major role in determining the portion size and hence contributes to decrease the glycaemic load.