

Selenium Content in Daily Meals Consumed by Sri Lankans - A preliminary study

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Selenium is a trace element which is essential to the human body as a micronutrient, mainly present as amino acid derivatives such as selenomethionine, selenocysteine and methylselenocystein. Selenium is beneficial but toxic in a narrow range (25 µg/day - 400 µg/day for person).¹ Selenium content in raw vegetables, cereal and legumes grown in Sri Lanka have been determined in previous studies.^{2,3}

The study reports the selenium content of sun dried samples obtained from the plates of meals (rice and curries) consumed for lunch. Analysis was carried out on samples obtained from five districts. Determination of selenium was carried out using Hydride Generation Atomic Absorption Spectrometric method on acid digested samples. Statistical analysis was carried out using one way ANOVA and Tukey's pairwise comparisons in MINITAB Release 14. The range of mean selenium content in meals consumed by Sri Lankans in the five districts is 55-60 µg/kg with an overall mean of 56.67 ± 2.208 µg/kg. This value is comparable to the daily requirement, 55 µg/day given by Food and Nutrition Board, Institute of Medicine,

USA.

Concentration of selenium in fried chicken was found to be less than that in chicken curry. Analysis on selenium on different curries consumed by Sri Lankans [chicken curry, dhal curry and cooked green leaves (Mallum)] indicated that mean concentrations as 84.25 µg/kg, 51.41 µg/kg and 47.54 µg/kg respectively.

The present study revealed that intake of selenium per meal by Sri Lankans is in the range 55-60 µg/kg and there is no significant difference in selenium concentration in meals among the selected districts as well among individual households in each district.

Keywords: Selenium, Daily intake, Sri Lankan

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