

AN INVESTIGATION OF THE MICRONUTRIENT CONTENT OF SELECTED FOODS CONSUMED BY STUDENTS OF THE UNIVERSITY OF THE WEST INDIES, ST. AUGUSTINE CAMPUS.

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Background: The micronutrient content of popularly consumed on-campus foods is unknown. Yet such an investigation is warranted because micronutrients play key roles in the body. Persons who study at the University of the West Indies campus St. Augustine are at increased risk for nutritional deficiencies because they might skip meals and or make poor food choices. One researcher argues that, portion sizes of burgers, fried potatoes, pizzas, soft drinks at fast food outlets have all increased 2.5 fold over the last 50 years. These meals are also typically energy dense. He continues reporting that energy density of the entire menu at fast food outlets is typically 1100 kJ /100g (Stender et al 2007). Despite this increase in size and quality an increase in the quantity of micronutrients in meals have not followed suit.

Objective: The general objective of the present study was to chemically analyze selected micronutrient contents of the popularly consumed meals on the St. Augustine campus.

Design: Meal Sample selection was done based on the results of a preliminary interview done with 72 students. Calcium, Iron, Magnesium, Sodium, Phosphorus, and Vitamin C content from the meals was analyzed using special techniques and relevant equipment such as the AAS- ashing technique, the UV Vis at 880 nm, and colorimetry. Data was analyzed using SPSS [version 12.0] and the statistical tests performed were, Independent sample t-test, ANOVA, Tukey HSD post hoc and simple linear regression.

Results: Consumption of fast food and Soft drinks was high. Mineral content among all study samples was varied. The KFC meal sample had the highest sodium levels (445.26 mg). The items that contained cheese the pizza and the cheese pie sample had the highest amount of calcium of all the studied samples. The cheese pie sample had the highest mean magnesium (15.29mg), phosphorus (74.84mg) and calcium (265.88mg) content. Low Iron levels were observed in Yvette's Callalo lunch sample (0.46mg).

Conclusion: Fast foods are the popular menu items consumed by University of the West Indies St. Augustine campus students. Regarding the micronutrient content of meals, both fast foods and traditional meals vary in mineral content from day to day. It was observed that differences in micronutrient content exist between all studied groups. Average sodium was found to be highest in the KFC meal sample (445.26mg) and lowest in the Mini garden pizza meal sample (112.63). Average calcium content was found to be highest in the Cheese pie meal sample and lowest in the Yvette's meal sample. On a micronutrient basis the Cheese pie sample is an ideal food because it provides adequate quantities of at least three micronutrients. This sample contained moderate sodium (302.05 mg) and average quantities of Iron (1.5 mg). However this food item may not possess an ideal composition of Vitamins and Macronutrients that was not currently investigated. Consumption of soft drinks should be limited. It was discovered that Trinidad fresh orange juice is a better source of Vitamin C than Sprite. Sprite was observed to be a poor source of Vitamin C (< 5 mg). Therefore Trinidad fresh Orange juice is an ideal beverage.

