Relationship between Energy, Macronutrient and Micronutrient Consumption with Obesity among School Aged Students in Shiraz, Fars

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Abstract

Background: Obesity is increasing in Iranian school aged and there is lack of information on the energy and macronutrient intake of children. The objective of this research was to study the energy and macronutrient intake in Iranian school children.

Materials and Methods: This is a cross-sectional descriptive study conducted on Iranian school aged boys and girls aged 14-19 years old from all the populated regions of Shiraz, Fars. Information was obtained through a questionnaire for the entire sample on the frequency of food items. We used a Nutritionist IV to analyze dietary intakes. All data entered in SPSS version 16 for statistical analysis.

Results: The age of the students ranged from 14 to 19 years. Mean ages of the girls and boys were 16.0 ± 0.97 and 16.0 ± 0.93, respectively. There were no significant difference regarding any macro and micro nutrient among these two groups (boys and girls) (P-value > 0.05). Calorie intake was not different among these two groups. Folate, iron, calcium and fiber intake were lower than the Recommended Dietary Allowance. Overall, the mean energy intake of students ranged between 312 and 3'896 of the Recommended Dietary Allowance for different age groups and also two genders. The percentage of mean energy intake when compared to the Recommended Dietary Allowance decreased with increasing age of boys and girls.

Conclusion: Low intake of fruits and vegetables and dietary fiber, high sugar intake and high energy % of saturated fat and dietary cholesterol by Iranian children is likely to increase their risk of obesity and cardiovascular diseases later in life. So, nutritional education programs in schools should emphasize the importance of healthy balanced diets and the risks of consuming empty calories.