

**PO1447****ASSOCIATION BETWEEN ENERGY DENSITY AND DIET COST IN CHILDREN**

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**Background and objectives:** Lower energy density diets are associated with higher diet quality, lower body weight and better health outcomes. However these type of diets are likely to cost more, which can be an obstacle to its consumption. To estimate the dietary energy density (DED) and to assess how the daily cost of diet is associated with DED in school children.

**Methods:** Children's data were obtained from a community-based survey selected from public elementary schools in Guimarães, Portugal. Of a total of 586 children attending these schools, 464 (51.5% girls), 6 to 12 years old, were studied. Dietary intake was assessed by a 24 hour recall between October 2007 and March 2008. DED (kcal/g) was calculated by three different ways: (1) with food and caloric/non-caloric beverages (DED1); (2) with food and caloric beverages (DED2); and (3) with food and no beverages (DED3). Energy adjusted diet cost (€/1000kcal) was calculated based on the collection of food prices available on a national leader supermarket website, and subjects were divided into tertiles according this variable. Anthropometric measures were taken and socio-demographic data was gathered from a questionnaire filled by parents. Logistic regression was used to estimate the association between diet cost and DED by sex, adjusting for age.

**Results:** Energy-adjusted diet cost was higher for children with the lowest DED. For boys, the energy-adjusted diet cost of the highest third of DED was lower, between 81% in the DED3 (p for trend <0.001) and 87% in the DED1 (p for trend <0.001), compared to the lowest third. Girls showed similar, but weaker associations between DED and diet cost.

**Conclusions:** Higher DED was associated with lower diet cost in children.

**Key words:** Energy-adjusted diet cost, dietary energy density and children.

**PO1448****MICRONUTRIENT ADDED FOODS ANALYSIS IN COLOMBIA: VOLUNTARY FORTIFICATION CONTEXT**

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**Background and objectives:** The aim of this research was to analyze, for the retail distribution channel in Colombia, the trend of the voluntarily micronutrient fortified foods, from the Euromonitor International database.

**Methods:** The data were gathered in three large stores directly from the nutritional, ingredients, and claims labels from 34 packaged food categories, all from the International Euromonitor database. The information was statistically processed and analyzed according to Resolution 333 and ENSIN 2010.

**Results:** There were found 314 micronutrients added foods, which were organized in 24 fortified foods categories, it was established that the percentage share of the most commonly used vitamins in voluntary fortification in Colombia are: vitamin A 14%, vitamin C 13%, 11% vitamin B9, and the percentage share of the minerals used are: Iron 41%, Zinc 29% and 24% Calcium. The categories with the highest percentage of participation of fortified foods were: for foods, breakfast cereals 30%, pasta 13% and others 19%, and for drinks: soy beverages 20%, juices (up to 24% of fruit) 16%, and fruit flavored beverages 13%. It was found that only the pasta from one company has voluntary fortification with micronutrients: vitamin A, C, E, Selenium and Zinc, and that, apart from the mandatory fortification of flour, there is an additional voluntary fortification for micronutrients folate and Iron. It was found that the categories of breakfast cereal and flavored milks have some micronutrients added, which supply 100% of the recommended daily value.

**Conclusions:** there are many products with voluntary fortification in the Colombian market that may help to decrease Iron, Vitamin A and Zinc deficiencies, which is considering as a public health issue in the country. These products provide between 10 to 50% DV for Iron, 10 to 90% DV for Vitamin A and 10 to 96% DV for Zinc.

**Key words:** micronutrient, voluntary fortification, Euromonitor International.