

Are children, adults and elderly women in Greece meeting dietary intake recommendations?

Ensuring adequate nutrient intakes is vital not just for preventing deficiencies, but also for optimizing health and wellbeing in all life stages. Despite the high prevalence of overweight and obesity and the overconsumption of calories, still inadequate nutrient intakes (vitamins and minerals) have been reported among European populations. This can be attributed to the more frequent consumption of nutrient-poor foods (i.e. high in added sugars and solid fats) compared with less energy-dense and more nutrient-rich foods (e.g. whole grains, vegetables, low-fat dairy products).

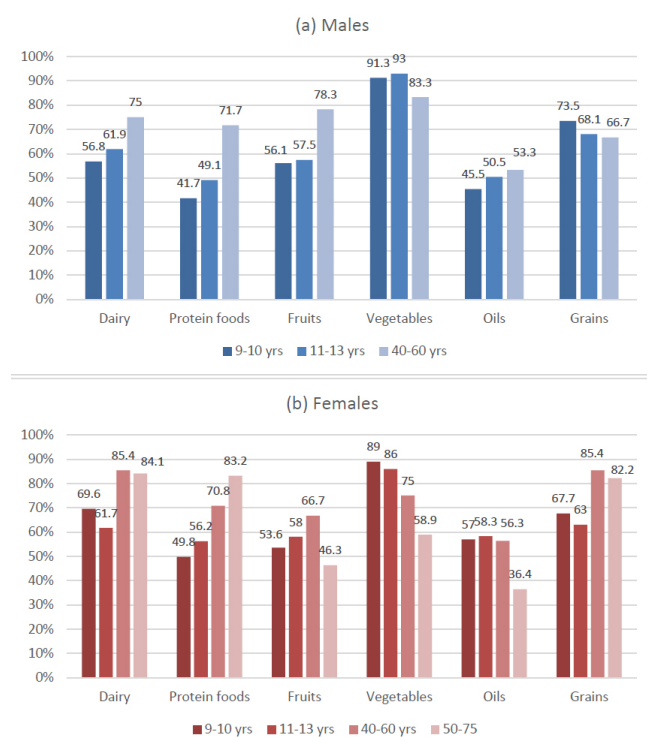


Fig. 1. Percentage of the population under study not meeting the food recommendations presented by sex [(a) males and (b) females] and age group.

In order to examine whether nutrients as well as food intake recommendations are met by three different age groups in Greece, relevant food intake data was obtained from 2660 schoolchildren (9-13 years old), 154 middle-aged adults (40-60 years old) and 720 elderly women (50-75 years old). Based on this data, both nutrient and food intakes were compared with the relevant dietary recommendations. Moreover, the degree up to which meeting food intake recommendations was also ensuring adequate intake of vitamins and minerals was examined.

As shown in Fig. 1, more than 50% of children, adults and elderly women were failing to consume the recommended daily portions of vegetables, dairy and grains. The subjects consuming the recommended portions of one food group that was considered to be the major food contributor for specific vitamins and minerals (e.g. fruits as the main contributor for vitamin C, dairy as the main contributor for calcium) were more likely to have adequate intakes of those nutrients, compared with their counterparts not meeting the relevant food intake recommendations. For example, those consuming the recommended portions of dairy were more likely to meet the recommendations for calcium intake compared to those not consuming the recommended portions. More specifically among those not consuming the recommended portions of dairy 59.3-96.7% were found to have inadequate intakes of calcium.

Moreover, our results showed that meeting food intake recommendations for just one food group does not ensure overall adequate nutrient intakes. Indicatively, among those consuming the recommended portions of fruits, 4-7% had inadequate intakes of vitamin C. This can be explained by the fact that although one orange can cover the recommended vitamin C intake but two apples or two bananas provide just 13mg or 21mg of vitamin C respectively, which is far below the recommendation. This clearly indicates that in order to ensure nutrient intake adequacy, a variety of foods from the different food groups should be consumed rather than just focusing on specific food groups or food items.

The findings of the current study highlight that large proportions of children, adults and elderly women in Greece are not meeting food intake recommendations. While some food groups are the major dietary sources of certain vitamins and minerals, there are other food groups that are also significantly contributing in achieving adequate nutrient intakes. Concluding, it is very important to consume the recommended portions from each food group but also to ensure that food variety is achieved through the consumption of nutrient-rich food items from all major food groups.

Publication

[Food group and micronutrient intake adequacy among children, adults and elderly women in Greece.](#)

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