

Carta al director

Should the food guide be implemented without evaluation?

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Dear Dr. Culebras:

We read with interest the recent article by González-Gross et al.¹ proposing a healthy lifestyle guide pyramid for children and adolescents. Although the proposed guide is an appealing tool that may contain up-to-date scientific information, it is important to emphasize that when referring to an educational tool, evidence-based evidence is not limited to basic research but to applied research as well. Easy-to-follow advice should be provided to the target population.

Since 1997 we have recommended the need for evaluation of food guidelines before they are publicly launched.²⁻⁵ We have also evaluated the impact of the graphics, comprehension of the message, and the ability to apply the information from the Apple of Health and the former Mexican Pyramid of Health Guide using a diet design score and focus groups and interviews.³ We later compared the Apple of Health with the illustration included with the "Norma Oficial Mexicana" ("The Good Eating Dish") and assessed the effectiveness of the Apple of Health to design a 1-day menu targeted at elementary school-age children from different socioeconomic levels⁴ and a long-term efficacy of the Apple of Health among 11- to 14-year-old children.⁵ Results of short- and long-term effects (24 months) show slightly improved changes in knowledge and the ability to design a healthy menu when using the Apple of Health.^{4,5} "The Good Eating Dish" was also evaluated by Casanueva et al.⁶ showing a higher inclusion of servings from animal products,⁶ suggesting that by using this illustration a higher consumption of energy may be expected; thus, it would not be advisable for a population with a high prevalence of diabetes.⁴ A diet with "higher than recommended calories" has also been shown following the 1992 US Food Pyramid.⁷

However, studies conducted by Bacardi et al.²⁻⁵ were conducted in the northern state of Baja California, Mexico, whereas the study conducted by Casanueva et al. was conducted in Mexico City;⁶ therefore, results could not be extrapolated to other populations within Mexico and to other age groups. Food guidance based on scientific knowledge of food composition and nutrient requirements has been provided by the U.S. Department of Agriculture since 1894.⁸ The first Food Pyramid was published in Egypt in 1954.⁹ However, it was not until 1992 after the US Department of Agriculture (USDA) designed the Food Pyramid to be used in conjunction with a 32-page booklet⁸ that a food guide pyramid was developed in different countries.⁴ These guidelines have been used mainly as stand-alone educational tools on posters, food packages, and educational handouts, which were misinterpreted.⁸ In fact, before releasing the USDA food guide pyramid, the effectiveness of its message was evaluated by comparing two graphics: a bowl and a pyramid. Whereas the bowl was better at communicating the concept of "eating a variety of foods", the pyramid was more effective for communicating both moderation and proportionality.⁸ However, there was no evaluation on other aspects of the food guide and there were no reported results conducted in different age and ethnic groups. It was also noted that the guide was ambiguous and not based on available scientific evidence.^{10,11} Thus, the American Center for Nutrition Policy and Promotion concluded in 2005 that the federal government's food guidance messages were too complex for a single graphic and that the new pyramid should simply become a symbol for nutrition policy, including a slogan directing consumers to sources where they could receive educational messages and information.⁶ Therefore, the new pyramid does not provide dietary guidance but rather guides the population to print materials for specific guidance. More recently, Willet and McCullough¹² reported that adherence to the dietary guidelines and the new food guide pyramid was associated with only a small reduction in major chronic disease risk in a population of > 100,000 US adult men and women, suggesting that the dietary guidelines were not offering optimal dietary guidance. Willet and McCullough also noted that the dietary guidelines should be

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Recibido: 12-VI-2008.
Aceptado: 14-VIII-2008.

evaluated for their ability to predict the occurrence of major illness.¹²

On the other hand, governments have received pressure from food producers to influence food guides.¹³ These pressures have led to some nutritional policy changes in the US,¹³ which highlights the inherent conflict of interest between food manufacturers, the persons and institutions that develop and promote food guidelines, and the government who is charged with the health of the population. Therefore, it is recommended that any conflict of interest from experts and institutions participating in the formulation of food guides should be reported.

It has been recognized that the use of a simple educational tool to convince the entire population may be misleading and not based on all available evidence. Therefore, illustrations should have limited goals, and evaluations of their effectiveness to achieve those goals are necessary for different age populations, cultural backgrounds, and availability of foods. Food guides should not be limited to only one illustration at a national level and may be a part of different tools involved in the learning process for changing food habits and consumption. Text messages should allow different populations to design their own instruments as part of the learning process. Information inadequately presented as a poster or in a food package may even be deleterious to health. Food guides should not be developed as a stand-alone educational tool or as a logo for the food industry, suggesting that any consumption of their products is healthy. Health professionals and educators should add information that is not included in a particular illustration or include additional information on other sources and reach beyond education to achieve significant and lifelong behavioral changes. Guidelines should be suggestions and as noted by Dr. Callaway "they do not serve as regulations." Greater individualization of dietary recommendations for both major subgroups of the population and for individual patients can improve

our effectiveness in preventing and treating specific diet-related chronic conditions.¹⁴

Editor's note: This letter has been submitted to Gonzalez-Gross et al. who declined to make any further comments.

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