

## Methodological advances in population studies of food and nutrition

Valid information is crucial when collecting and analyzing food intake data in population surveys. In the latter half of the 20<sup>th</sup> century, ecological studies in Japanese immigrants living in Hawaii and in the continental United States suggested that the degree of incorporation of the Western lifestyle could influence the occurrence of cancer and cardiovascular diseases. Due to the lack of individual information, estimates obtained in ecological studies are not always confirmed in more accurate studies. Since then, the choice of the most adequate method for evaluating individual eating habits has been a complex decision, based among other aspects on the data collection's objectives, desired precision, and available resources.

This thematic issue features articles on important topics related to dietary measurement. Although dietary measurement has a broad area of application in various fields of knowledge in health and particularly in the definition of public policies, the existing methods have advantages and disadvantages and apply to diverse situations. The main purpose of food frequency questionnaires has been to classify individuals according to habitual food consumption, while more descriptive methods concerning real consumption have applied basically to evaluation of deficits and excesses in individual groups or populations. A combination of methods is essential, and the development of a broad methodology with photographic documentation and data transmission in the not too distant future, even in studies with large samples, will allow measuring diet through a combination of methodologies and techniques. Improved measurement of habitual food consumption contributes more effectively to planning health activities (even though various studies in this supplement indicate the political nature of food guideline definitions and the food industry's role in this process).

With the aim of contributing to this field, the current thematic issue presents studies on the validation of food frequency questionnaires (FFQ), applications of new food intake data analysis techniques (including comparisons between surveys on household food balance and availability), application of statistical techniques to food pattern analysis, and critical analysis of dietary guidelines for healthy eating, highlighting the proposal for a new food classification based on the extent and purpose of industrial processing. In our opinion, the articles illustrate the progress in food and nutritional epidemiology in Brazil since the first publications on FFQ validation studies 10 years ago and indicate important areas for research in developing methods to estimate food intake, besides pointing to directions for appropriate public health measures.

*Marly Augusto Cardoso*

*Faculdade de Saúde Pública, Universidade de São Paulo, São Paulo, Brasil.*

*marlyac@usp.br*

*Maria Teresa Anselmo Olinto*

*Programa de Pós-graduação em Saúde Coletiva, Universidade do Vale do Rio dos Sinos,*

*São Leopoldo, Brasil.*

*Rosely Sichieri*

*Instituto de Medicina Social, Universidade do Estado do Rio de Janeiro, Rio de Janeiro,*

*Brasil.*