

Catalogue no. 11-522-XIE

**Statistics Canada International
Symposium Series - Proceedings**

**Symposium 2006 :
Methodological Issues in
Measuring Population Health**

2006



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Impact of Number of Repeat 24 Hour Recall Interviews on Estimation of Usual Intakes from Food and Nutrition Surveys

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Abstract

National Food and Nutrition Surveys provide critical information to support the understanding the complex relationship between health and diet in the population. Many of these surveys use 24 hour recall methodology which collects at a detailed level all food and beverages consumed over a day. Often it is the longer term intake of foods and nutrients that is of interest and a number of techniques are available that allow estimation of population usual intakes. These techniques require that at least one repeat 24 hour recall be collected from at least a subset of the population in order to estimate the intra individual variability of intakes. Deciding on the number of individuals required to provide a repeat is an important step in the survey design that must recognize that too few repeat individuals compromises the ability to estimate usual intakes, but large numbers of repeats are costly and pose added burden to the respondents. This paper looks at the statistical issues related to the number of repeat individuals, assessing the impact of the number of repeaters on the stability and uncertainty in the estimate of intra individual variability and provides guidance on required number of repeat responders .

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