FOOD FREQUENCY RECALLS: ARE THE RESULTS SENSITIVE TO THE TIME-PERIOD ASKED ABOUT?

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Dietary intakes of energy and nutrients are frequently assessed, especially in epidemiological studies, from food frequency inventories. Such studies need to specify the period of time to which the food consumption frequencies refer - either quoting an explicit reference period or asking about "usual" intake. Is the choice of reference period important?

In connection with a study of cardiovascular risk factors in North and North-West Tasmania in 1992, we explored whether reported frequency of consumption of particular foods was sensitive to the reference period specified. Our work extends a small-scale study of Worsley (1991) to a large random sample of the community.

The study, which took place over a six-month period, involved 555 adult subjects randomly selected from the electoral rolls. Respondents were randomly allocated to one of seven reference periods ("past week", "past fortnight", "past month", "past three months", "past six months", "past year", "usually"). A diverse group of 40 foods was asked about, and the respondent was requested to indicate frequency of consumption of each food during the specified period, using a graduated scale ranging from "didn't eat" to "every day", with alternate points explicitly labelled. (For the longer reference periods, a nine-point scale was used. For shorter periods, the scale was truncated by leaving out points indicating inapplicable frequencies, the "past week" scale being the shortest with only six points.)

For the present analysis, we collapsed the consumption frequency categories into four: "didn't eat", "ate less than once per week", "ate once per week", "ate more than once per week". Contingency tables were set up for each food, tabulating these frequency categories against the reference periods. With all seven periods included, 33 of the 40 foods showed significant differences between reference periods (chi-square $P<0.05$). When "past week" data were omitted from the tables, 25/40 foods showed a chi-square $P<0.05$. When "past fortnight" data were also omitted, only 7/40 foods showed a chi-square $P<0.05$. With omission of "past week", "past fortnight" and "past month" data, only 2/40 foods showed a chi-square $P<0.05$.

These results suggest that using a reference period of less than the past month is unlikely to provide stable estimates of the population distribution of consumption frequency for most foods. Using a reference period of longer than the past three months, however, is unlikely to improve stability of the estimates. Thus, the optimum reference period needed for stable estimates is in the vicinity of the past one-to-three months.

Our data are consistent with two different hypotheses: that month-to-month variations in food consumption frequencies are small, or that estimates of "usual" consumption frequency are heavily influenced by memories of the recent past.

WORSLEY, A. (1991). Appetite 16: 69.

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