Chapter 4: 24-hour recall and diet record methods

Interpretive Summary:

Technical Abstract: The two methods described in this chapter, the 24-hour dietary recall (24hdr) and the food record (FR) method, are the currently preferred methods of dietary intake assessment, and are based on foods and amounts actually consumed by an individual on one or more specific days. This minimizes some sources of error. If a suitable number of recalls or records are collected over a long period (e.g., six recalls or records per individual spaced over a 12 month period), these methods may also be used to estimate usual intake in prospective studies. The number of days required depends on the day-to-day variability (a major source of error for estimating usual intake) of the food groups or nutrients of interest and the precision desired. Other methods like food frequency questionnaires (FFQ) and diet histories report usual intake over longer periods of time and minimize error of day to day consumption, but introduce errors of memory for estimation and averaging over long time intervals. The short-term methods allow greater specificity for describing foods and food preparation methods, and flexibility for analyzing the data. However, due to the extensive effort required to collect and process multiple days of food records or recalls, these methods are infrequently used as the primary method for estimating usual intake in large scale epidemiologic research. As new technology decreases the errors, costs and participant burden of these methods, they should become more widely used.
In Malaysia, 24-hour diet recalls (24-hr DR) and food records method have been more widely used than weighed intakes as it have high reliability, easy to administer, has high response rate and acceptable accuracy (Zamaliah et al. 1999; Norimah & Leong 2000; Chee et al. 2002; Moy & Suriah 2002; Poh et al. 2005). A new FFQ is usually validated by comparing the mean values for a particular nutrient from the FFQ and a comparison method. Semi-Quantitative Food Frequency Questionnaire for Assessment of Energy, Total Fat, Fatty Acids, and Vitamin A, C and E Intake among Malaysian Women: C