

QUANTITATIVE DIETARY ASSESSMENT IN HUMAN POPULATIONS: THE DEVELOPMENT  
AND ASSESSMENT OF FOOD PHOTOGRAPHS TO AID IN THE USE OF A FOOD-  
FREQUENCY QUESTIONNAIRE

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The increased interest in diet as it relates to health and disease has generated much research involving the quantification of dietary intake. This has made apparent the need for more accurate tools to assist in documenting food quantity (James et al. 1981). The proceedings from a national workshop on this topic indicate the specific needs in Australia (Margetts 1982).

The objective of this study was to develop a food photography kit for Australian foods to aid in estimating portion size. Measured serving sizes of selected foods were photographed on standard plates, the recipe and nutrient data being documented with each photograph. A computer program was written to link these photographs with a nutrient data-base through the technique of a frequency questionnaire.

The photographs have been used in the field in a case-control study of the relationship between diet and pre-cancerous conditions. A food-frequency questionnaire using the photographs was given to 120 subjects and reliability studies were carried out on a subgroup of 30. Validity studies on a similar sub-sample were carried out to assess the photograph kit's value in eliciting accurate portion sizes.

Portion sizes weighed by the subjects were compared with their estimates of food from photographs, 70% of the food items being non-significantly different (Student t-test). However the variance on any one food item was high; 30 to 50% of the mean weight. Photo estimates of commonly used vegetables and meats were close to the weights of the actual portions.

JAMES, W.P.T., BINGHAM, S.A. and COLE, T.J. (1981). Nutr. Cancer 2 : 203.  
MARGETTS, B. (1982). J. Food Nutr. (in press)

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