

MEASUREMENT OF FOOD INTAKE IN THE ELDERLY
BY FOOD PHOTOGRAPHY

SALLY MORGAN,* DELIA M. FLINT,* D.M. PRINSLEY,*
M.L. WAHLQVIST** and A.E. PARISH**

Some conventional food-intake dietary methods are not reliable when used to assess dietary intake of the elderly - particularly questionnaires and personal food records.

As part of a study to identify a practical yet non-invasive and valid method to measure the food intake of elderly subjects, their food intake was measured by weight and photographed at the same time on 35 mm coloured slides. A selection of these slides, comprising 100 food items, were screened to a group of 13 senior dietitians from major Melbourne metropolitan hospitals. The dietitians individually identified and estimated the amount (g) of each food item.

Ninety-three percent of food items were correctly identified by all dietitians. The actual weights and mean estimates as well as the coefficients of variation of a selection of foods are summarised below.

Actual weights and mean estimated weights of selected food items

Food	Weight (g)	Mean estimated weight (g)	Over/under estimation (g)	CV (estimated weights)(%)
Cornflakes }	20.0	25.9	+ 5.9	26.7
Milk }	128.0	120.8	- 8.8	26.3
Porridge }	140.0	177.8	+37.8	43.5
Milk }	90.0	100.6	+10.6	26.8
Poached egg	60.0	55.8	- 4.2	8.8
Roast lamb	75.0	92.7	+17.7	33.0
Corned beef	95.0	101.7	+ 6.7	29.5
Luncheon meat	62.0	56.5	- 5.5	17.8
Boiled potato	70.0	59.6	-10.4	16.1
Roast potato	45.0	43.9	- 1.1	28.7
Swedes	60.0	62.3	+ 2.3	32.1
Cabbage	25.0	39.2	+14.2	39.7

The differences between the coefficients of variation indicate inconsistency in estimating the amounts of food. There are two major factors contributing to these inconsistencies: the differences between individual dietitians and the difficulty in estimating certain foods.

These results indicate that appropriate training programs might be useful.

* National Research Institute for Gerontology and Geriatric Medicine,
Mount Royal Hospital, Parkville, Victoria 3052

** Department of Human Nutrition, Deakin University, Geelong, Victoria 3217