

NUTRITIONAL EVALUATION OF AUSTRALIANS - PRELIMINARY RESULTS
INCLUDING VITAMIN C AND IRON NUTRITURE

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Very few nutrition surveys in Australia include biochemical values. A recent mini-survey in the Hawkesbury River valley on the north-western outskirts of Sydney evaluated anthropometric, dietary and selected biochemical indices.

Approximately 110 volunteers (age 16 - 55 years; 42 males and 67 females) were surveyed during the late winter/early spring seasons of 1982. Anthropometric measurements included height, weight, skinfold thickness (triceps) and blood pressure; 5- to 7-d dietary records were obtained and evaluated using computer analyses; plasma (5 mL) and serum (10 mL) samples were collected and evaluated for iron, vitamin C, cholesterol, vitamin A and B-carotene status according to standard methodologies (Interdepartmental Committee on Nutrition for National Defense 1963); urine samples were screened for glucose and vitamin C, acidified and frozen for riboflavin and thiamin determinations.

Preliminary anthropometric results indicate that the frequency of obesity of this population using weight/height² and skinfold thickness standards was lower (13%) than that recently reported by the Australian Heart Foundation (Anon 1981). Urinary analysis, using STIX (Ames Division, Miles Laboratories Inc., Elkhart, Indiana, USA), indicated that 37% of the subjects had ascorbic acid levels of 25 mg/dL or higher in urine. Serum ascorbic acid data confirmed these results with a mean value of 1.55 mg/dL, no subjects being at risk for ascorbic acid nutriture. Iron status, using haemoglobin and haematocrit values, surprisingly indicated that at least 20% of the males were marginally at risk while only 4% of the females had non-acceptable values.

These preliminary results indicate the value of including biochemical determinations in the assessment of the nutritional status of Australians. Moreover, they indicate that further investigation is warranted, particularly for iron nutriture in adult males.

ANON (1981). 'The National Heart Foundation Risk Factor Prevalence Study - Report No. 1' (Australian Heart Foundation: Canberra).

INTERDEPARTMENTAL COMMITTEE ON NUTRITION FOR NATIONAL DEFENCE (1963). 'Manual for Nutritional Surveys', 2nd ed. (US Government Printing Office: Washington DC).