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Health Status And Dietary Intakes Of Elderly Mainland Chinese In Auckland

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ABSTRACT

Objective: To produce baseline data on the food consumption patterns, dietary intakes, anthropometric measurements and physical activities of Mainland Chinese elderly over 60 years living in Auckland, and reveal any changes in these measurements after immigration. The impacts on health status were assessed.

Subjects: Twenty-five men and twenty-five women aged over 60 years, who were born in Mainland China and have immigrated to New Zealand.

Method: Three 24-hour recalls were used to evaluate dietary intake. Questionnaires were pre-tested before survey, and were used to determine the demographic details, eating habits, food consumption patterns, life style and physical activity patterns. Anthropometric measurements included body weight, height, skinfolds, elbow breadth, body circumferences, blood pressure, blood glucose level, body mass index (BMI), waist/hip ratio, arm muscle circumference, arm muscle area, and percentage body fat were also calculated.

Results:

- Because of the language barrier the use of New Zealand health services, such as visiting a general practitioner, was low.
- On average BMI in men (24.5kg/m^2) was lower than that in women (24.8kg/m^2). Men also had larger waist circumferences than women, but they had similar hip circumferences. Thus, men had a larger waist/hip ratio (0.87) than women (0.84) ($p<0.05$). Men and women had similar mean systolic and diastolic blood pressures (130.5mmHg, 83.8mmHg vs. 130.5mmHg, 81mmHg), however, men's mean blood glucose level were higher than women's (6.0mmol/l vs. 5.5mmol/l).
- According to the WHO BMI standards, 48% of male and 52% of female subjects in the present study were considered overweight. Only one man had impaired glucose

tolerance. BIA readings indicated 60% of men and 64% of women had a percentage body fat over 25% and 32% respectively.

- Using the criteria in the New Zealand Health Survey, 64% of male subjects and 44% of female subjects were highly active compared to 53.8% of their New Zealand counterparts.
- In this study, the average energy intakes of Chinese elderly were 8,932kJ and 7,032kJ for men and women respectively. Average protein per kilogram of body weight intakes were 1.24g/kg and 1.21g/kg for men and women. Mean total energy from protein was 15.8% and 17.2% for men and women respectively. Of all study subjects, 88% had fat intakes between 15% and 33% of total energy, which met the New Zealand Nutrition Taskforce recommendation. Total mean energy from carbohydrate for the male and female subjects were 55% and 54.7% respectively.
- Compared to the Chinese RDA's and Australia RDI's, the intakes of calcium, zinc, vitamin A and vitamin D were insufficient. All subjects also had insufficient dietary selenium according to the Australia RDIs. Their iron status requires further research.
- Systolic and diastolic blood pressures, and blood glucose levels in male study subjects were positively correlated with BMI. Body weight, waist circumference, hip circumference, waist to hip ratio and BMI for men were also positively correlated with systolic blood pressure. However, no significant correlations were observed for female subjects.
- Education level was positively related to rice consumption and vitamin A intake, and negatively related to meat intake, salted vegetable intake, salt intake and sodium intakes for both men and women. Family income was positively related to meat consumption. Therefore, socio-economic status may influence the food habits and nutrient intakes of the study subjects.

Conclusion:

- A trend towards increasing BMI and body fat has been found in a Chinese elderly population in New Zealand. The maintenance of traditional dietary habits and

encouragement to increase physical activity levels are important in this population group.

- Energy, protein and carbohydrate intakes of the Chinese elderly were sufficient. Inadequate intakes of calcium, zinc, vitamin A, vitamin D, selenium and fiber were the main nutritional problems in this group. Therefore, foods rich in these nutrients should be recommended for the migrant Chinese elderly. Some nutrient supplements may be necessary. Dietary intakes should be monitored with time.
- Socioeconomic factors, such as education and family income, affect food habits and nutrient intakes in this population.

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