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**DIETARY INTAKE AND ANTHROPOMETRIC
MEASUREMENTS OF NEWLY ARRIVED AND
LONGER RESIDENT MAINLAND CHINESE
WOMEN IN AUCKLAND**

**A thesis presented in partial fulfillment of the
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Kai Hong Tan

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ABSTRACT

Objective: To produce baseline data on the food consumption patterns, dietary intakes and anthropometric measurements of Mainland Chinese women living in Auckland and reveal any changes in these measurements after immigration. The impacts on health of dietary change were assessed.

Subjects: Fifty-five subjects originating from Mainland China, aged between 20 to 45 years, with 25 newly arrived (having lived in New Zealand for less than two years) in the 2-year group and 30 longer resident Chinese (having lived in New Zealand for more than four years) in the 4-year group.

Methods: Data collection included a socio-economic questionnaire, anthropometric measurements and dietary intake record. Anthropometric measurements included body weight, height, skinfolds, waist circumference, hip circumference and blood pressure. BMI and Waist/Hip ratio were also calculated. A single 24-hour recall and two days of weighed diet records were used to assess dietary intake.

Results: All the mean anthropometric measurements were higher in the 4-year group than in the 2-year group. Except for the differences of waist and hip circumference, all differences did not achieve statistical significance. Study subjects had lower BMI levels than New Zealand women and their Mainland Chinese counterparts. According to the New Zealand classification, study subjects had a lower prevalence of overweight (13%), but a higher prevalence of W/H ratio excess than that in New Zealand women (49%, 25% respectively). The study subjects had a better blood pressure profile than New Zealand women. More than 90% of the subjects fell into the normal blood pressure range. None of the subjects had high blood pressure.

In this study, there were no significant differences in nutrient intake between the two study groups. Median energy of all the subjects was 6965kJ, protein 71.2g (with the protein energy ratio of 17%), lipid 68.6g (with the lipid energy ratio of 36.8%),

carbohydrate 182g (with the carbohydrate energy ratio of 43.9%), fiber 16.2g, cholesterol 324g, total vitamin A 541ug, calcium 488mg and iron 12.5mg per day. Alcohol intake was very low. Excessive fat/energy ratio, low carbohydrate/energy ratio, inadequate intakes of calcium, and high intakes of sodium were the main nutritional problems in the study subjects. Study subjects had a lower sodium intake, but higher calcium and fiber intake than their Chinese counterparts, whereas, calcium intakes of the study subjects were much lower than that of New Zealand women. The fatty acid profile was better than New Zealand women, with higher polyunsaturated fatty acid and lower saturated fatty acid intakes. Iron nutritional status requires further research.

In the present study, food patterns in the 2-year group were similar with those in the 4-year group, except for the lower consumption of rice and its products in the 2-year group. Compared to the Chinese counterparts, study subjects ate less cereal, vegetables, salted vegetables, organ meats and oils, but more legume, fruits, poultry and dairy food.

Conclusion: It is important for migrant Chinese to maintain their traditional dietary habits. Furthermore, there is a need to develop obesity indicators that are appropriate for different races and to monitor the trend of dietary intake and anthropometric change in this population with time.

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