

Thesis Title                    A Comparasion of Nutritive Value. of Dietary  
   Intake in Elderly Women with and without  
   Goitre-iodine Deficiency in Khon Kaen, Province

Name                               Sumontha Thernserekul

Degree                            Master of Scince (Public Health)  
   major in Nutrition

Thesis Supervisory Committee

   Suvimol Tanasuphasiri, M.S.  
   Paradee Temcharoen, M.P.H.  
   Wongdyan Pandii M.S. (Bios), M.S.(P.H.)

Date of Graduation            31 March B.E. 1993 (2536)

### Abstract

This study was designed to compare nutritive values of food intake, especially energy and protein, frequency of foods consumption, iodine inhibitor in foods and socioeconomic status between the groups of elderly women with an without iodine deficiency goitre in Khon Kaen, Province. The study population in the goitrous group was composed of 52 elderly women over 60 years old with goitre attending O.P.D. clinics of Khon Khan Center Hospital and Srinakarin Hospital. The non-goitrous or control group was 76 elderly women at the same age who visited both hospital for medical checking up and were diagnosed by physicians to be in good health and without goitre.

The 24-hr. dietary recall for 1 day and food record for 2 days were obtained from every subject. A brief questionnaire concerning socioeconomic status, food pattern and frequency of food consumption was completed.

The result revealed that the amount of energy, protein, minerals and vitamins except vitamin C, consumed by the goitrous group were significantly less than those consumed by the control group. The

percentages of goitrous women who consumed energy and protein less than  $\frac{2}{3}$  or 67% of the RDA (Recommended Daily Dietary Allowances) were 65.04 and 26.90 respectively, whereas those of the control group were only 13.20 and 5.30 respectively. The kinds of food consumed by the goitrous group was less than by the control group include rice and rice products, beans, meat, pork, fresh water fishes, eggs and vegetables except salted water fishes, fermented water fishes and fruits. The frequency of protein especially pork and beef, consumption in the goitrous group was significantly lower than that in the control group ( $P$ -value = 0.041 and 0.028), but that of other sources of protein were not significantly different. The iodine inhibitors such as corn, cassava, cabbage and bamboo shoot were consumed at a significantly higher frequency by the goitrous group ( $P$ -value = 0.001, 0.007, 0.023 and 0.05 respectively). Regarding the iodized salt used in food preparation, the control group reported of using iodized salt more often than the goitrous group in the past but at the time of interview, all used rock salt with no iodine. There was no significant relationship between socioeconomic status, energy and protein intakes in the goitrous group. But energy and protein intakes were significantly related to the marital status and the number of independent children in the control group.

The recommendation is that further study should investigate the relationship between body mass index and the quantity of food consumption or the symptom of the disease. The comparison of urinary iodine level of both groups should be compared. The custom culture and food practice of the population as factors related to food intake which indirectly effected the incidence of the disease should be included. However, the nutrition education given to the elderly women particularly the risk group with an emphasis in protein and energy intake was important to prevent diseases and should be paid more attention.