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CHOMJIT WONGRATTANACHAI: FOOD CONSUMPTION PATTERNS AND BONE DENSITY OF THAI MENOPAUSAL WOMEN: A COMPARISON BETWEEN VEGETARIANS AND NON-VEGETARIANS. THESIS ADVISORS: MANDHANA PRADIPASEN, M.D., Dr.P.H. REWADEE CHONGSUWAT, Ph.D. WONGDYAN PANDII, Dr.P.H. WANNA TRIVITAYARATANA, M.D., M.Sc. 131 p. ISBN 974-664-048-8

This cross-sectional comparative study aimed to investigate whether the bone density and osteoporosis were different between vegetarian and non-vegetarian menopausal women. The menopausal women were recruited from Pratom-A-Sok, and Santi-A-Sok religious communities for vegetarian group and the clubs for the elderly at Phramongkutklao, Siriraj hospital non-vegetarian. Each group was matched by years since menopause (± 2 years) and consisted of 30 subjects. Data were collected using questionnaires including demographic information and food consumption. Measurement of undominant distal forearm was performed to assess bone density for indicated biological variability and prediction for fracture risk. The energy and nutrients intakes were calculated with nutrition calculated program. The differences of energy and nutrient intakes and bone density between the two groups were compared by paired t-test.

The findings of this study showed that bone density and risk of osteoporosis were similar among vegetarian and non-vegetarian menopausal women. The vegetarians' top ten most frequently consumed food items were cooked home-pounded rice, bean curd, soybean sauce, home-pounded rice soup, black sesame seeds, ripe banana, orange, soymilk, straw mushroom and cone mushroom whereas the other group's were cooked milled rice, orange, stir-fried pork (lean-meat), soybean sauce, fish sauce, cooked home-pounded rice, boiled pork (lean-meat), ripe banana, soymilk and pineapple. The average energy, animal protein, carbohydrate, calcium, and vitamin B1 intakes were significantly higher in non-vegetarians ($p < 0.05$). On the contrary, protein from plant, fiber, and ferrous intakes were significantly higher in vegetarians ($p < 0.05$). Long-term differences in protein, calcium and phosphorus intake could affect bone mineral mass.