Thesis Title Nutrient intakes and health status of Thai vegans: trace elements and vitamin B_{12}

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ABSTRACT

Nutrient intake and health status of trace elements and vitamin B_{12} were investigated in Thai adult strict vegetarians. Twenty four-hour diets were collected from 18 volunteers using duplicate portion sampling technique and the nutrient compositions were determined by chemical analysis and compared with corresponding figures of normal mixed diets. The intakes of protein, iron, copper and vitamin C were fulfilled by the vegan diets. However few other nutrients including energy, zinc, and vitamin B_{12} intakes were below the RDA. The dietary fibre consumption in the vegans was twice that of the non-vegetarians. With respect to nutritional status of iron, one subject of iron deficiency anemia and 4 subjects showed iron depletion. Copper intakes of the subjects were adequate and serum copper and ceruloplastmin were normal. Superoxide dismutase showed low level of the activity among the subjects, however, its sensitivity and specificity remains to be studied before the absolute conclusion on the copper status based on this paramerter can be made.

No clinical data of zinc deficiency was observed in the vegans. The serum B_{12} level showed nutritional deficiency in 50% of the vegan subjects and three out of 18 subjects had macrocytic red cells. The anthropometric assessment showed marginal status of energy and protein. However further studies are still made for long term follow up and further improvement of trace elements and vitamin B_{12} status in vegans.