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ENVIRONMENT AND GENDER INFLUENCE THE NUTRITIONAL AND HEALTH STATUS OF KOREAN CENTENARIANS

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The nationwide Korean centenarian study, begun in 2001, consists of a variety of faculty including members from medicine, nutrition, psychology, family and environmental medicine, geography and anthropology. Some interesting features of the Korean centenarians have emerged regarding gender, geography and diet. The female to male ratio is more than ten to one. This ratio is not uniform throughout Korea however, and it very interestingly appears to vary according to whether the person has lived their life near the seashore or in the mountains. We have noted significant dietary differences between these two broad geographic groups. While this study confirms the finding of other studies that though they are fewer in number, the men are better off functionally and medically, we have further noted that the male and female centenarians living in the mountainous regions are better than those living near the seashore. Similar findings have been noted in Sardinia, Italy. Based on these data, it can be concluded that the living habitat might influence the gender differences in longevity, particularly through via the influences of nutritional and health status.

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NUTRITIONAL STATUS AND MEAL PATTERN OF KOREAN NONAGENARIANS: AS A EFFECTIVE APPROACH TOOL OF NUTRITIONAL INTERVENTION FOR HUMAN AGING

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In the quest for a long and healthy life, many people look toward nutrition as a cure-all and want to know what we should or should not eat. Unfortunately we still have little understanding about it. But, there is increasing evidence that life-style, particularly nutrition, is associated with the causes of age-related chronic diseases. Statistics indicate that the elderly are the fastest growing population. And, most studies of the elderly reveal that despite improved life expectancy, the number of years elderly individuals live with disease and disability is increasing. So we need possible tools for intervention and prevention to approach the health challenge of aging. One of successful trials is modified dietary pattern of the healthy long-lived population. In this work, we analyzed the dietary habits and nutritional status of Korean nonagenarians in order to the information on the desirable food selection and dietary pattern for nutrition intervention of elderly population. A survey was conducted with 91 subjects (26 males and 65 females) and their food intakes were measured by the combination of one meal weighing and 24-hr recall, and their dietary habits, food preferences and meal patterns were collected by individual interview. In our study, the proportion of carbohydrate in daily energy intakes was about 67%, and the average intake of crude fiber intake was relatively low. But the average blood glucose level of the subjects was within normal range for the aged over 85, indicating a lower degree of insulin resistance. A main resource of carbohydrate was rice. The average intake of protein, calcium, iron, zinc were 107%, 60%, 106% and 60% of RDA for elder people over 75, respectively. The lower intake of vitamins as low as 70% RDA was found except vitamin B6 and niacin. Their meals were mainly composed of cereals and vegetables. The animal and plant food intakes were 88:12 in males and those of females were 83:17, showing a tendency of plant-based meals. Although nutrients that showed NAR over 0.7 were protein, iron, vitamin B6, niacin and phosphate, but those with INQ over 1. Nutrient with INQ below 0.7 was only vitamin E. The high INQ values of nutrients represent a good quality diet. So, even though their nutritional quantity did not appear to be enough, but their nutritional quality was relatively high. Therefore, good nutrition status including appropriate amounts of foods with high quality of nutrients has contributed to the long and healthy life. The higher preference of food group was fruits, legumes, mushrooms and vegetables, but the amount of intakes is higher in vegetables than the others. Most frequently consumed meal pattern was rice plus soybean paste soup, Kimchi and side dishes. The side dish consumed frequently was Namul (blanched and seasoned vegetables). From this result, they are taking Korean traditional meal pattern, providing enriched antioxidant vegetables and good functional food - soybean paste. Taking this information together, we suggest that the adoption of a Korean traditional-style diet, in which the abundance of bioactive compounds provided by vegetables, Kimchi and soybean paste, adding some dairy products, nuts and fruits grants a higher protection toward unhealthy life of elderly.