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Nutritional status of snack takers after evening meal in Korea: from the 2005 Korean National Health and Nutrition Examination Survey

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To investigate the nutritional status of snack takers after evening meal in Korea, 3903 subjects 20 years and above without illness were selected and their anthropometry, blood biomarkers and food and nutrients intake were analysed from the data 2005 Korean Health and Nutrition Examination Survey. The subjects were divided into three groups according to energy intake from the night snack; 0 kJ (0 kcal), 4.184–2087.816 kJ (1–499 kcal), 2092 kJ (\geq 500 kcal) by using the 24-h recall data. The non-snack group was 66.0%, the snack group under 2092 kJ (500 kcal) was 28.4% and the snack group above 2092 kJ (500 kcal) was 5.6% of all the subjects. Most of the men and the young-aged are included in the group taking night snack above 2092 kJ (500 kcal). When adjusted with sex and age, night snack energy was positively correlated with waist circumference, Glu-FBS, Glu-PP120 and also positively correlated with the daily intake of many nutrients and food group such as meat and egg, beverages and alcohols. When adjusted with energy intake, the snack group above 2092 kJ (500 kcal) took more alcohol, fat, potassium, retinol, riboflavin and water, while it took less carbohydrate, dietary fibre, calcium, phosphorus, iron, sodium, vitamin A and β -carotene compared to the rest of the two groups. Especially alcohol intake is about six times higher compared to the other two groups. When adjusted with energy intake, the snack energy showed positive correlation with just the intake of water, fat and alcohol. The night snack group above 2092 kJ (500 kcal) showed the lowest carbohydrate energy ratio of $51.5 \pm 13.6\%$ and the highest fat energy ratio of $21.08 \pm 8.49\%$ among the three groups, while the no or less snack group showed carbohydrate energy ratio of 64.88 ± 12.31 , 63.44 ± 10.85 and fat energy ratio of 17.39 ± 8.85 , 18.84 ± 8.06 individually. This result suggests that habitual snacking above 2092 kJ (500 kcal) after evening meal could lead to the unbalanced diet with high-energy and low-nutrient density.