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Study on Dietary Intakes of Magnesium and Calcium by the Food Duplicate Method for Japanese

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Summary

In the third year of the study on dietary intakes of magnesium (Mg) and calcium (Ca) for adult Japanese, the intakes at nationwide in 1980's were investigated in comparison of those in 1990's. The measurement of Mg and Ca of the individual food duplicate samples by ICP-AES as already mentioned were carried out 401 of males and 694 of females in 49 regions in winter, and 189 of males and 151 of females in summer. (1) Mg intake by sex and age: Mg intake by the age group of 20, 30, 40, 50 and 60 yrs. were respectively, 307 ± 161 , 308 ± 90 , 324 ± 105 , 308 ± 105 and 269 ± 105 (M \pm SD, mg/day) for males, and 244 ± 71 , 260 ± 79 , 272 ± 87 , 274 ± 91 and 249 ± 71 for females. Mg intake for males was apparently more than it for females over all age groups, although its difference became less with aging. The decrease of Mg intake by aging appeared in 60 yrs and over for both of sexes. (2) Mg intake by region: Mg intake on average for males in 31 regions was 301 mg/day (a max. of 418 and a minimum of 226) and it for females in 39 regions was 263 mg/day (a max. of 407 and a minimum of 173). There were the large regional variations of Mg intake in both of sexes. (3) Ca intake by sex and age: The situation of Ca intake by sex and age was similar to the Mg. The individual difference of Ca intake was more than it of Mg. The average intake of Ca in total was 700 ± 321 in males and 612 ± 273 mg/day in females. (4) Ca intake by region: The max. Ca intake by region was 1,078 for males and 875 mg/day for females, in both of a dairy farming site, and the minimum was 510 and 406 mg/day in males and females respectively. (5) Seasonal fluctuation of Mg and Ca intake in 15 regions was not significant. (6) Secular change of Mg and Ca intake between 1980's, 1990's and 2000's: The Mg intake in 1980's is more about 15 - 20 mg/day than that in 1990's and 2000's, but not on the Ca intake. It is worthy of the significant positive correlation of the Mg intake for females in 15 regions between 1980's and 1990's ($p < 0.05$).