

**Trace Mineral Intakes and Dietary Phytate:Zn and Phytate x Ca:Zn Molar Ratios in Korean**

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한국인 미량무기질 섭취량과 식이성 피틴산:아연, 피틴산 x 칼슘:아연의 몰농도 비율  
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Zinc nutriture depends on both the amount in the diet and its bioavailability. Phytate has been considered as the greatest negative effect on zinc absorption with the synergistic calcium effect. The molar ratio of phytate:Zn is a sensitive and reliable tool for the estimation of the relative adequacy of dietary zinc. It has been reported that molar ratio of phytate:Zn above 10 caused the detrimental zinc absorption. The phytate, calcium, and zinc intakes for the estimation of the molar ratios of calcium, phytate and zinc, to assess the zinc status in Korean, have not been assessed. Hence, we determined the phytate, calcium, and zinc intakes and calculated the molar ratios of phytate:Zn, phytate x Ca:Zn with the food intake per capita in Korea. Daily intakes of iron and manganese per capita were also determined. The food intake data used in this study were taken from '95 National Nutrition Survey Report('95NNSR). A cross-reference index and various literature values were used to estimate the dietary zinc, calcium, phytate, iron and magnesium intakes of Korean per capita and to substitute foods on the data base for the 214 foods which were reported in the '95NNSR. Daily intakes of zinc, phytate, and magnesium, which are not included in the '95NNSR data, were estimated to be 10.16 mg/day/capita(68% of RDA for male and 85% for female), 1676.58 mg/day/capita, 267.98 mg/day/capita(77% of RDA for male and 96% for female), respectively. The calcium and iron intakes were estimated to be 426.53 mg/day/capita(61% of RDA for both male and female) and 267.98 mg/day/capita(77% of RDA for male and 96% for female). The molar ratios of phytate:Zn and phytate x Ca:Zn were 15.9 and 168.9, respectively. These data concern about the relatively increased risk of zinc deficiency in Korean, based on their lower zinc intake below the zinc RDA for Korean and the high dietary molar ratio of phytate:Zn and phytate x Ca:Zn.©