

Vitamin B-6 Inadequacy Is Prevalent in Rural and Urban Indonesian Children

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Abstract

The vitamin B-6 status of Indonesian children was evaluated by determining their dietary vitamin B-6 intakes, erythrocyte alanine aminotransferase activity coefficients and plasma pyridoxal phosphate (PLP) concentrations. Thirty-eight third-grade elementary school children (ages = 8–9 y) in rural and 39 in urban areas of Bogor, West Java, Indonesia, voluntarily served as subjects. The subjects included 39 male and 38 female students. The mean vitamin B-6 intake of the subjects was 0.57 mg/d. Fifty-five percentage of the children reported consuming <0.5 mg/d of vitamin B-6 (the 1998 Estimated Average Requirement for those 4–8 y). Erythrocyte alanine aminotransferase activity coefficients ≥ 1.25 were observed in 30%, and plasma PLP concentrations ≤ 30 nmol/L were observed in 25%; these values are considered indicative of vitamin B-6 inadequacy. Similar percentages of male and female subjects had inadequate vitamin B-6 status. Significantly more ($P < 0.05$) rural children than urban had inadequate vitamin B-6 status as assessed by the three indices. Vitamin B-6 inadequacy was found to be prevalent among these Indonesian children, especially those living in rural areas.

KEY WORDS: • *vitamin B-6 status* • *alanine aminotransferase* • *plasma PLP* • *Indonesian children*