

## A micronutrient intervention trial to assess the effect of zinc on anthropometric variables in preschool children

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Growth faltering is known to be associated with zinc (Zn) deficiency, a micronutrient that has hitherto received little attention in the local context. High prevalence of marginal zinc deficiency has been reported in populations dependent on cereal-based diets, elsewhere. A 3-month micronutrient intervention trial was undertaken to assess Zn nutriture in rural children (Nawagurukele, Doluwa; Kandy District), whose diets were primarily cereal based. Heights and weights of apparently healthy children (n=106, age: 33-67 months) were determined in two randomly assigned groups. The test group: (n=58) received a tablet containing 10 mg Zn, 44 mg ZnSO<sub>4</sub> · 7 H<sub>2</sub>O (Wörwag Pharma, Germany), 3 mg iron, 44.5 mg calcium, 45 µg vitamin A, 1.2 µg vitamin D, 0.8 mg magnesium and B vitamins (B1, B2, B3, B6, B12) as syrup, daily. All nutrients except Zn and B vitamins were at a dosage <60% of the recommended daily allowance. The control group: (n=48) received a placebo (State Pharmaceutical Manufacturing Corporation of Sri Lanka) with all nutrients as above. Height for age (H/A), weight for age (W/A) and weight for height (W/H) indices and their z-scores were subjected to analysis of covariance.

The mean±SD of the respective heights (cm) before and after (within a week) supplementation were 101.9±6.94 and 103.14±7.04 (control) 102.91±4.83 and 104.23±4.68 (test) for boys, and 102.97±5.12 and 104.63±5.12 (control) and 100.75±5.38 and 102.28±5.36 (test) for girls. Similarly those of respective weights (Kg) were 13.74±1.82 and 14.06±1.83 (control) 15.08±2.34 and 15.37±2.27 (test) for boys and 14.59±1.86 and 14.92±1.92 (control) 13.74±1.53 and 13.94±1.57 (test) for girls. There were no significant differences between the test and control groups for the respective adjusted (least square) means for H/A (P=0.347, n=100), W/A (P=0.182 n=105) and W/H (0.415, n=106). Zn did not appear to have a significant effect on the anthropometric variables tested.

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