

ORIGINAL RESEARCH COMMUNICATION

# Efficacy of daily and weekly multiple micronutrient food-like tablets for the correction of iodine deficiency in Indonesian males aged 6-12 mo<sup>1, 2, 3, 4, 5</sup>

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**Background:** Infants are highly vulnerable to iodine deficiency, and little data exist on the effect of multiple micronutrient supplementation on their iodine status.

**Objective:** We aimed to compare the efficacy of daily and weekly multiple micronutrient food-like tablets (foodLETs) on increasing iodine status among infants.

**Design:** In a double-blind, placebo-controlled trial, 133 Indonesian males aged 6–12 mo were randomly assigned to 1 of 4 groups: a daily multiple-micronutrient foodLET providing the Recommended Nutrient Intake (RNI) (DMM), a weekly multiple-micronutrient foodLET providing twice the RNI (WMM), a daily 10-mg Fe foodLET (DI), or placebo. Urinary iodine (UI) concentrations were measured at baseline and at 23 wk.

**Results:** At baseline, the average UI concentration (1.37  $\mu\text{mol/L}$ ) was within the normal range, and 30.8% of subjects had iodine deficiency (UI <0.79  $\mu\text{mol/L}$ ). At 23 wk, the DMM group had the highest increment in UI; however, after adjustment for initial UI, the changes in UI were not significantly different between the 4 groups ( $P = 0.39$ ). Initial UI correlated inversely with the changes in UI ( $P < 0.001$ ). The DMM group had the greatest reduction and increment in the proportion of iodine-deficient infants and in infants with iodine excess, respectively; however, no significant difference was found in these proportions ( $P = 0.13$  and  $P = 0.42$ ) between the 4 groups.

**Conclusion:** Daily consumption of a multiple-micronutrient foodLET providing the RNI during infancy may be one strategy to improve iodine status.

**Key Words:** Iodine • deficiency • Indonesia • male infants • multiple micronutrient food-like tablet • urinary iodine

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