

ABSTRACT

Objectives: To measure the effect of daily consumption of provitamin A-biofortified cassava on vitamin A status in children aged 5-13 years. **Methods:** Mild-to-moderate vitamin A deficient children (n=342) were randomly allocated to groups receiving: 1) 375 g of white cassava and placebo supplement; 2) 375 g of white cassava and a supplement of β -carotene (1,054 μ g); 3) 375 g of biofortified cassava and placebo supplement. Children received the intervention 6 days/week for 18.5 weeks. Field staff and participants were blinded to supplementation. Cooked cassava was mashed with salt and 4 g of oil per portion. Biofortified cassava supplied 208 μ g RAE, which is ~50% of the age-specific estimated average requirement for vitamin A for children. The primary endpoint was serum retinol concentration and secondary endpoint was serum β -carotene concentration, both at end of intervention; in the analysis, we adjusted for sex and serum concentrations at baseline of retinol, C-reactive protein and 1-acid-glycoprotein. **Results:** Complete data were collected for 337 children. Compliance to cassava feeding was similar between treatment groups. Preliminary results showed that consumption of biofortified cassava and β -carotene supplementation resulted in a similar increase in retinol concentrations (for both interventions, mean: 0.81 μ mol/L versus 0.77 μ mol/L; difference, 95% CI: 0.04 μ mol/L, 0.00-0.07 μ mol/L) but in a different increase in serum β -carotene concentration (for β -carotene supplement group, mean: 0.25 μ mol/L (95% CI: 0.17-0.33), for biofortified cassava group, mean: 0.81 μ mol/L (95% CI: 0.73-0.88)) **Conclusions:** Provitamin A-biofortified cassava improves the vitamin A status of primary school children in Kenya.