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NovaSil clay does not affect the concentrations of vitamins A and E and nutrient minerals in serum samples from Ghanaians at high risk for aflatoxicosis.

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Abstract

To assess the potential interference of NovaSil (NS) clay with micronutrients in humans, vitamins A and E and minerals (15 nutrient and 15 non-nutrient minerals) were measured in serum samples from a 3-month intervention trial with NS. Participants (n = 177) were randomly divided into three groups that received 3.0 g NS day⁻¹ (high dose, HD), 1.5 g NS day⁻¹ (low dose, LD), or placebo (PL). Levels of vitamins A and E in serum were comparable among the three study groups at baseline, 1 month and 3 months of NS intervention. Gender-stratified non-parametric mixed-effect model analysis showed no significant effects of dose and dose-time interaction for levels of vitamins A and E. A significant time effect was detected; however, it was limited to an increase in vitamin E in the male participants over the course of the study. No significant differences were found in levels of the nutrient and non-nutrient minerals between the HD and PL groups at baseline and 3 months of NS intervention, except for strontium levels. Strontium was significantly increased (p < 0.001) in the HD group (male = 113.65 +/- 28.00 microg l⁻¹; female = 116.40 +/- 24.26 microg l⁻¹) compared with the PL group (male = 83.55 +/- 39.90 microg l⁻¹; female = 90.47 +/- 25.68 microg l⁻¹) following the 3-month intervention with NS. These results, combined with safety and efficacy data, confirm that NS clay is highly effective in reducing aflatoxin exposure and acts as a selective enterosorbent that does not affect the serum concentrations of important vitamins and nutrient minerals in humans.

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Publication Types, MeSH Terms, Substances

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