Proceedings of the Nutrition Society (2024), **83 (OCE1)**, E150 doi:10.1017/S002966512400168X

47th Annual Scientific Meeting of the Nutrition Society of Australia and Nutrition Society of New Zealand, 28 November – 1 December 2023, Nutrition & Wellbeing in Oceania

Micronutrient intake from complementary foods of Asian New Zealand infants

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The complementary feeding period (6-23 months of age) is when solid foods are introduced alongside breastmilk or infant formula and is the most significant dietary change a person will experience. The introduction of complementary foods is important to meet changing nutritional requirements(1). Despite the rising Asian population in New Zealand, and the importance of nutrition during the complementary feeding period, there is currently no research on Asian New Zealand (NZ) infants' micronutrient intakes from complementary foods. Complementary foods are a more easily modifiable component of the diet than breastmilk or other infant milk intake. This study aimed to compare the dietary intake of micronutrients from complementary foods of Asian infants and non-Asian infants in NZ. This study reported a secondary analysis of the *First Foods New Zealand* cross-sectional study of infants (aged 7.0-9.9 months) in Dunedin and Auckland. 24-hour recall data were analysed using FoodFiles 10 software with the NZ food composition database FOODfiles 2018, and additional data for commercial complementary foods(2). The multiple source method was used to estimate usual dietary intake. Ethnicity was collected from the main questionnaire of the study, answered by the respondents (the infant's parent/caregiver). Within the Asian NZ group, three Asian subgroups were identified – South East Asian, East Asian, and South Asian. The non-Asian group included all remaining participants of non-Asian ethnicities. Most nutrient reference values (NRV's)(3) available for the 7-12 month age group are for total intake from complementary foods and infant milks, so the adequacy for the micronutrient intakes from complementary foods alone could not be determined. Vitamin A was the only micronutrient investigated in this analysis that had an NRV available from complementary foods only, allowing conclusions around adequacy to be made. The Asian NZ group (n = 99) had lower mean group intakes than the non-Asian group (n = 526) for vitamin A (274μg vs. 329μg), and vitamin B12 (0.49μg vs. 0.65μg), and similar intakes for vitamin C (27.8mg vs. 28.5mg), and zinc (1.7mg vs. 1.9mg). Mean group iron intakes were the same for both groups (3.0mg). The AI for vitamin A from complementary foods (244μg) was exceeded by the mean intakes for both groups, suggesting that Vitamin A intakes were adequate. The complementary feeding period is a critical time for obtaining nutrients essential for development and growth. The results from this study indicate that Asian NZ infants have lower intakes of two of the micronutrients of interest than the non-Asian infants in NZ. However, future research is needed with the inclusion of infant milk intake in these groups to understand the total intake of the micronutrients. Vitamin A intakes do appear to be adequate in NZ infants.

Keywords: complementary foods; infant; micronutrients; New Zealand Asian

Ethics Declaration

Yes

Financial Support

This study is supported by the Health Research Council (HRC) of New Zealand (19/172). The HRC had no role in the study design, writing of the protocol manuscript and the decision to submit the manuscript for publication.

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