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Patterns of tree nut sensitisation among those with challenge confirmed food allergy at 12 months in the HealthNuts study

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Introduction
The LEAP study findings1 have resulted in updated infant feeding advice recommending peanut introduction before 12 months of age. However, advice regarding the introduction of other nuts is at present unclear and the usefulness of sensitisation status to guide introduction recommendations is debated. We aimed to determine the rate of tree nut sensitisation among those with challenge confirmed allergy to egg, peanut or sesame at age 1 year.

Methods
Within the HealthNuts study, a population-representative longitudinal cohort study of 5276 infants, skin prick testing (SPT) was performed to egg, peanut and sesame at age 1 recruitment. Those with a SPT >1mm had an oral food challenge (OFC) to test for food allergy. For those attending OFC clinic appointment additional SPT were performed for tree nuts (almond, cashew, and hazelnut). Tree nut sensitisation was defined as >3mm wheal. Tree nuts with negative SPT were instructed to be introduced to the diet and those tree nuts with positive SPT avoided.

Results
Of 493 12 month olds with challenge confirmed food allergy, 143 (29%, 95%CI 25.0, 33.2) were sensitised to one or more tree nuts at age 1. Those with single food allergies had the lowest rates of tree nut sensitisation with 31% (95% CI 19.1, 46.0) of single peanut allergic infants (n=51) sensitised to one or more tree nuts and 23% (95% CI 18.8, 27.8) of those with single egg allergy (n=364). Those with two or more food allergies (n=104) had higher rates of tree nut sensitisation at 48% (95%CI 38.2, 58.1). Cashew was the most common tree nut sensitisation at 23%, followed by almond (13%) then hazelnut (11%).

Conclusion
Tree nut sensitisation is common among those with all forms of food allergy at 12 months of age. Sensitisation rates are highest for those with multiple food allergies and similar for those with peanut and egg allergy.

References