



INTRODUCTION

Randomized clinical trials showed that **earlier peanut introduction into the infant diet can prevent peanut allergy in select high-risk populations.**

This led to **changes in infant feeding guidelines in 2016** to recommend **early peanut introduction for all infants** to reduce the risk of peanut allergy.

We aimed to **measure the change in population prevalence of peanut allergy** in infants after the introduction of these new guidelines and **evaluate the association between early peanut introduction and peanut allergy.**



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ASSOCIATION BETWEEN EARLIER INTRODUCTION OF PEANUT AND PREVALENCE OF PEANUT ALLERGY IN INFANTS IN AUSTRALIA

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**#INFANCY
#GUIDELINES
#PEANUT
#FOODALLERGY**

METHODS



Two population-based cross-sectional samples of infants aged 12 months were recruited **10 years apart** using the same sampling frame and methods to allow comparison of changes over time.

Infants were **recruited from immunization sessions** around Melbourne, Australia and were **eligible** to participate **regardless of peanut exposure or allergy history.**

Questionnaires collected data on peanut introduction and reaction history.

Infants underwent skin prick tests (SPT) to four foods including peanut, and oral food challenges if SPT positive. Peanut allergy was defined as a positive oral food challenge result or a clear history of recent reaction in infants with positive SPT.

Prevalence estimates were standardized to account for changes in population demographics over time.



RESULTS

PARTICIPATION

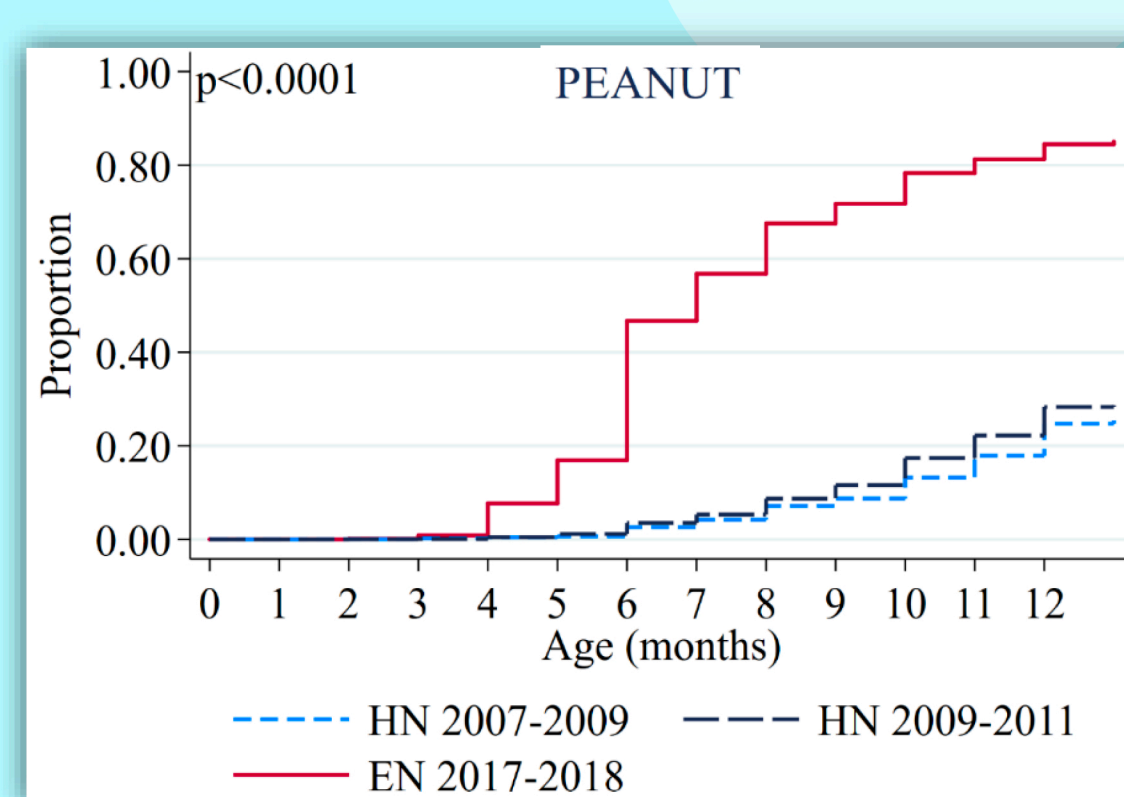
The two population-based studies recruited a total of **7,209 infants.** The HealthNuts study included **5,276 infants recruited in 2007-2011** and EarlyNuts included **1,933 infants recruited in 2017-2019.**

CHANGES IN INFANT FEEDING PRACTICES & PEANUT ALLERGY PREVALENCE

There were **dramatic changes to infant feeding practices** following introduction of new infant feeding guidelines in 2016 (1, 2). **85% of infants were consuming peanut products by 12 months in 2017-19** – a **3-fold increase** compared to 10 years earlier (Figure 1) (1).

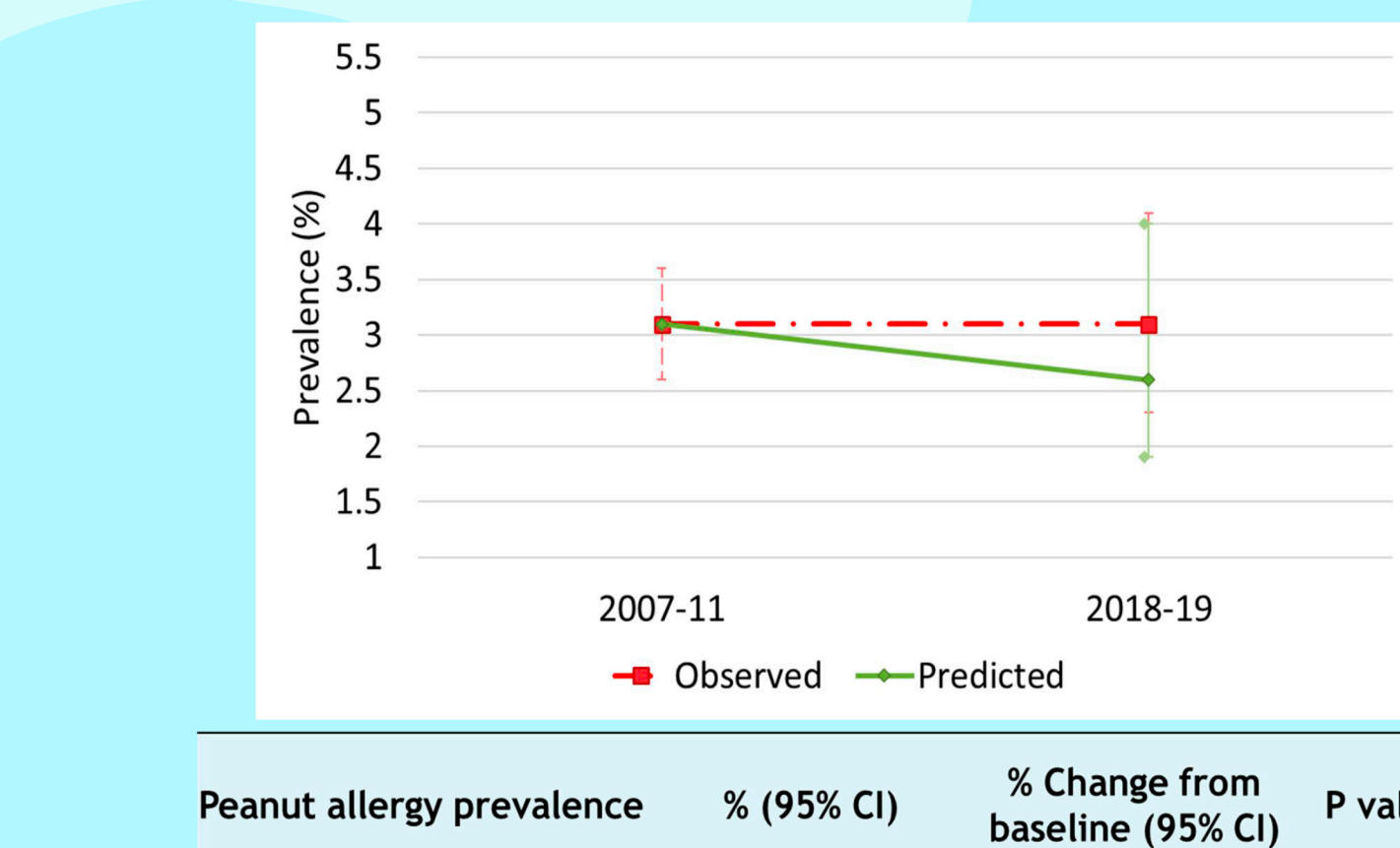
Unexpectedly, this large increase in early peanut introduction only resulted in a small, non-significant **decrease in peanut allergy from 3.1% to 2.6%**, controlling for changes in population demographics over time (Figure 2) (3).

Figure 1. Proportion of infants introduced to peanut by age 12 months in 2007-2011 compared with 2017-2019 (1).



HN: HealthNuts cohort, 2007-2011
EN: EarlyNuts cohort, 2017-2019

Figure 2. Change in population peanut allergy prevalence between 2007-2011 and 2017-2019.



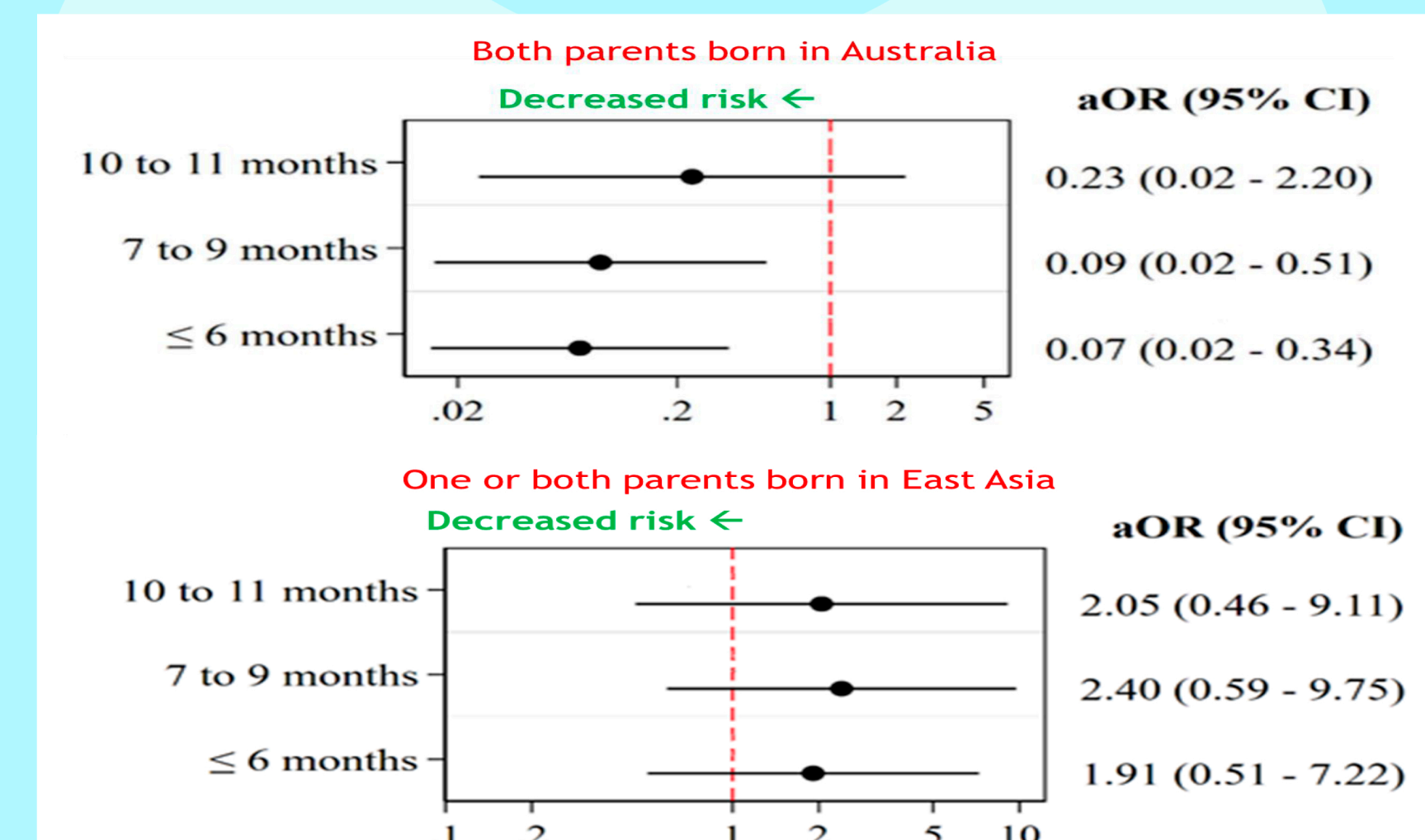
Peanut allergy prevalence	% (95% CI)	% Change from baseline (95% CI)	P value
Observed HealthNuts	3.1 (2.6 - 3.6)	Ref group	
Unadjusted EarlyNuts	3.1 (2.3 - 4.1)	0.1 (-1.0, 1.1)	0.917
Adjusted EarlyNuts*	2.6 (1.8 - 3.4)	-17.2 (-43.0, 13.1)	0.242

*The adjusted/predicted peanut allergy prevalence estimates were standardised to the baseline study, HealthNuts, distribution of: infant ancestry, family history of food allergy, family history of hay fever, dog ownership, number of siblings, and interactions between family history of food allergy and study.

RELATIONSHIP BETWEEN THE RISK OF PEANUT ALLERGY AND PARENTAL COUNTRY OF ORIGIN

Earlier introduction of peanut was associated with a decreased risk of peanut allergy among infants with **both parents born in Australia**, but **not among infants with parents born in East Asia**, in the EarlyNuts cohort (Figure 3).

Figure 3. Association between age of peanut introduction and peanut allergy at age 1 year in the EarlyNuts study.



Reference group is infants who delayed peanut introduction to 12 months or beyond. aOR adjusted for SES, number of siblings, childcare attendance, family history of food allergy.

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CONCLUSION



This work showed for the first time that

population-level changes in infant feeding practices are possible,

demonstrating a **large increase in early peanut introduction to infants after the introduction of new infant feeding guidelines** aimed at preventing food allergy in Australia.

However, the **resulting reduction in peanut allergy was less than expected**, thus there is a **clear need to develop additional peanut allergy prevention strategies.**

Findings from this study also identified groups with lower uptake of early peanut introduction and higher rates of allergy, including children born to migrant parents, highlighting the **need for translated, culturally appropriate resources on infant feeding for allergy prevention.**

These findings highlight the **importance of population-based studies to understand the population effects of advice** derived from clinical trials.

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