

Benefits of early peanut introduction

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Clinical question

Does early peanut introduction in infancy influence the development of peanut allergy?

Bottom line

Early peanut introduction reduces the risk of peanut allergy in high-risk infants from 17.2% to 3.2% at 5 years. Normal-risk infants might also benefit. As 9% of high-risk infants were excluded owing to a positive skin prick test (SPT) result, it might be reasonable to investigate those at highest risk before exposure.

Evidence

- An RCT randomized high-risk infants (severe eczema, egg allergy, or both) aged 4 to 11 months (N=640) to peanut consumption (6 g peanut/week) or avoidance.¹
 - At 5 years, there were positive oral food challenge results for peanut in 3.2% of the consumption versus 17.2% of the avoidance group (number needed to treat of 8).
 - Harms included 7 of 319 infants reacting to a baseline food challenge in the consumption group (6 required antihistamines, 1 oral steroids). At 5 years, 1 child in the avoidance group required epinephrine after the oral food challenge.
 - Limitations included no placebo group and infants were excluded if their SPT results were greater than 4 mm (9% of infants).
- Another RCT randomized normal-risk breastfed infants (N=1303) aged 3 months to early introduction of 6 allergens (eg, 2 g peanut/week) or avoidance of allergenic foods before 6 months.²
 - At 1 to 3 years of age, there was no significant difference in positive oral food challenge results for peanuts (1.2% in early group vs 2.5% in avoidance group).
 - Limitations included a complex protocol that led to statistically significant differences in adherence (avoidance, 93%; early introduction, 43%), and exclusion of infants with peanut sensitization (SPT results >0 mm).
- An observational study followed newborns (N=2124) to examine food introduction timing and sensitization.³ Peanut avoidance during the first year increased risk of sensitization (SPT results >2 mm) (odds ratio of 1.76; 95% CI 1.07 to 3.01).
 - Limitations included potential recall bias, and confirmatory oral food challenges were not done.

Context

- The early exposure hypothesis came from the 10-fold lower risk of peanut allergy among Israeli children

compared with UK children despite greater intake of peanuts during infancy (7.1 g/month vs 0 g/month).⁴

- A large cohort study (N=10907) suggested lower odds of peanut allergy in offspring of nonallergic mothers with increased peanut consumption during pregnancy of 5 times per week or more versus less than once per month (odds ratio of 0.31; 95% CI 0.13 to 0.75).⁵

Implementation

Infants with severe eczema or egg allergy are at highest risk, requiring allergy testing preferably by SPT before peanut consumption.⁶ Peanut-specific blood immunoglobulin (Ig) E can also be measured, but anything above a level of 0.1 kUA/L does not rule out allergy. About 21% of infants with an IgE level below 0.35 kUA/L (generally considered negative) will have a positive oral food challenge result.⁷ Infants with mild or moderate eczema or those without eczema or other food allergies do not require further evaluation.⁶ Blood IgE testing for multiple foods is not recommended owing to false-positive results. Guidelines and recipes for introducing peanuts are available.⁶

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Competing interests

None declared

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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