

# Early introduction of infant-safe peanut protein to reduce the risk of peanut allergy

Amitha Kalaichandran MHS MD, Tom Marrs MBBS PhD, George du Toit MBChB

■ Cite as: *CMAJ* 2019 July 22;191:816. doi: 10.1503/cmaj.181613

*CMAJ* Podcasts: author interview at <https://soundcloud.com/cmajpodcasts/181613-five>

## 1 Infants who are fed peanut protein regularly have a lower risk of peanut allergy

A randomized controlled trial that included 640 infants younger than 11 months with either egg allergy or moderate-severe atopic dermatitis found that 3.2% of children in the treatment group, who ate 2 g of peanut butter 3 times per week, developed peanut allergy after 5 years compared with 17.2% of children in the avoidance group ( $p < 0.001$ ).<sup>1</sup>

## 2 For most infants, peanut protein may be introduced at home between 4 and 6 months

To prevent the development of peanut allergy, it is sensible to introduce infant-safe peanut protein (i.e., paste, butter, powdered puff) as a first food. Information on the introduction of peanut is available in Canadian and American recommendations.<sup>2,3</sup>

## 3 Likelihood of peanut allergy is higher in infants with severe atopic dermatitis

The more severe the atopic dermatitis in infants, the greater the risk of peanut allergy, especially if other household members eat peanut at home.<sup>4</sup> Infants without atopic dermatitis or with mild atopic dermatitis (e.g., requiring only barrier cream) are best suited for peanut introduction in the home.

## 4 Infants with risk factors for allergy should be seen by a specialist before introduction of peanut

The US National Institute of Allergy and Infectious Diseases recommends allergy testing (skin-prick or specific immunoglobulin E testing) in infants with severe eczema, egg allergy or both before introducing peanut.<sup>3</sup> The Allergy Societies of Canada, Australia and the UK do not mandate this. Allergy tests for peanut can provide reassurance at negative or low values; universally agreed upon safe cut-off thresholds have not been established.<sup>4</sup>

## 5 Adequate amounts of peanut need to be eaten regularly to reduce the risk of allergy

Eight grams of peanut butter (1 heaped teaspoon, 1.5 regular teaspoon) or 17 g of peanut puffs should be consumed at least twice weekly to protect against peanut allergy.<sup>5</sup> This intervention does not treat peanut allergy.

## References

1. Du Toit G, Roberts G, Sayre PH, et al. Randomized trial of peanut consumption in infants at risk for peanut allergy. *N Engl J Med* 2015;372:803-13.
2. Abrams EM, Hildebrand K, Blair B, et al. Practice point: timing of introduction of allergenic solids for infants at high risk. Ottawa: Canadian Pediatrics Society; 2019. Available: <https://www.cps.ca/en/documents/position/allergenic-solids> (accessed 2019 Jan. 29).
3. Togias A, Cooper SF, Acebal ML, et al. *Addendum guidelines for the prevention of peanut allergy in the United States: report of the NIAID-Sponsored Expert Panel*. Bethesda (MD): National Institute of Allergy and Infectious Diseases (NIAID); 2017. Available: <https://www.niaid.nih.gov/sites/default/files/addendum-peanut-allergy-prevention-guidelines.pdf> (accessed 2019 Feb. 3).
4. Brough HA, Liu AH, Sicherer S, et al. Atopic dermatitis increases the effect of exposure to peanut antigen in dust on peanut sensitization and likely peanut allergy. *J Allergy Clin Immunol* 2015;135:164-70.
5. Perkin MR, Logan K, Tseng A, et al. Randomized trial of introduction of allergenic foods in breast-fed infants. *N Engl J Med* 2016;374:1733-43.

**Competing interests:** George du Toit has received grant and honoraria support from the National Institute of Allergy and Infectious Diseases (NIAID, NIH), Food Allergy & Research Education (FARE), MRC & Asthma UK Centre, UK Department of Health through NIHR, Action Medical Research and the National Peanut Board. He sits on the Scientific Advisory Board of Aimmune Therapeutics and the HUK Advisory Board for DBV Technologies. He is the Principal Investigator on Aimmune and DB clinical trials. No other competing interests were declared.

This article has been peer reviewed.

**Affiliations:** Department of Pediatrics (Kalaichandran) University of Ottawa, Ottawa, Ont.; Department of Pediatrics (Marrs, du Toit), St. Thomas' Hospital, Department of Pediatrics (Marrs, du Toit), Evelina Children's Hospital, London, UK

**Acknowledgements:** The authors thank Drs. Elissa M. Abrams and Edmond S. Chan for their helpful feedback on the manuscript.

**Correspondence to:** George du Toit, [George.DuToit@gstt.nhs.uk](mailto:George.DuToit@gstt.nhs.uk)