Background
Peanut allergy is estimated to affect 1-3% of the population\(^1\) and its prevalence has substantially increased in the past 10-15 years\(^2\). It is the leading cause of anaphylaxis and death related to food allergy\(^3\). Recent studies have explored the relationship between dietary introduction and prevention of peanut allergy.

In 2008, the American Academy of Pediatrics retracted previous recommendations, and concluded that there was no convincing evidence for early food avoidance to prevent development of allergy\(^4\). In 2011, the Canadian Paediatric Society issued a joint position statement with the Canadian Society of Allergy and Clinical Immunology\(^5\) with a recommendation to not delay introduction of solid food beyond six months while active introduction at four to six months of age is ‘still under investigation’.

Results from LEAP study
A landmark United Kingdom study, Learning Early About Peanut Allergy (LEAP)\(^6\), investigated whether early introduction of peanut-based products prevented allergy in high-risk infants. 640 infants (4-11 months) with severe eczema and/or egg allergy were stratified to cohorts based on preexisting sensitization assessed using skin prick test (SPT): 542 non-sensitized (0mm wheal) and 98 sensitized (1-4mm wheal). 76 infants with SPT wheal greater than 4mm were excluded due to high-risk of severe reactions. The two groups were randomized to regularly consume or completely avoid peanut products until 60 months of age, when peanut allergy was determined using an oral challenge with peanut protein.

The prevalence of peanut allergy showed a striking difference of 17% in the avoidance group compared to 3% in the consumption group, with a corresponding number needed to treat of 7.1. This effect was demonstrated in both the non-sensitized group (primary prevention) as well as the sensitized group (secondary prevention).

Current Recommendations and Implications
The LEAP study is the first prospective, randomized trial that clearly demonstrates early introduction reduces the risk of peanut allergy. An interim guidance from international allergy collaborations was issued to highlight the potential benefits\(^7\). It supports dietary introduction of peanut products in high-risk infants between 4 and 11 months of age (Level 1 evidence). It also recommends healthcare providers to consider evaluation by allergists (including SPT and food challenge) in infants with early-onset allergic diseases before initiating peanut introduction, similar to the screening procedures in the LEAP study.

Applications
Current Canadian guidelines are being revised to reflect new evidence and raise awareness. Changing the culture from ‘not delay’ to ‘active introduction’ for primary prevention is vital in the setting of increasing peanut allergy. However, healthcare resources must be ready to accommodate these applications, especially the increasing need for evaluation by an allergist in the large number of high-risk infants at an early age. Further research is required to address the optimum dose to prevent allergy, the prevalence of allergy after cessation of regular consumption, and applications to other allergenic foods.

Summary
For high-risk infants, early feeding at 4-6 months can be an effective intervention in primary prevention of peanut allergy. For non high-risk infants, delayed introduction beyond 6 months is not recommended routinely.
References:


5. Chan ES, Cummings C. Canadian Paediatric Society, Community Paediatrics Committee and Allergy Section. Dietary exposures and allergy prevention in high-risk infants: a joint statement with the Canadian Society of Allergy and Clinical Immunology. Paediatr Child Health 2013;18:545-54.
