



ELSEVIER

Contents lists available at ScienceDirect



Special Article

Consensus communication on early peanut introduction and the prevention of peanut allergy in high-risk infants

Q1 Primary contributors: David M. Fleischer, MD¹; Scott Sicherer, MD²; Matthew Greenhawt, MD³; Dianne Campbell, MB BS, FRACP, PhD⁴; Edmond Chan, MD⁵; Antonella Muraro, MD, PhD⁶; Susanne Halken, MD⁶; Yitzhak Katz, MD⁷; Motohiro Ebisawa, MD, PhD⁸; Lawrence Eichenfield, MD⁹; Hugh Sampson, MD¹⁰;

For the LEAP Study Team: Gideon Lack, MB, BCh¹⁰; George Du Toit, MB, BCh⁶; Graham Roberts, DM⁶; Henry Bahnson, MPH¹¹; Mary Feeney, MSc, RD¹⁰;

Secondary contributors: Jonathan Hourihane, MD¹; Jonathan Spergel, MD, PhD¹; Michael Young, MD¹; Amal As'aad, MD³; Katrina Allen, BMedSc, MB BS, FRACP, PhD⁴; Susan Prescott, BMedSc, MB BS, FRACP, PhD⁴; Sandeep Kapur, MD⁵; Hirohisa Saito, MD, PhD⁸; Ioana Agache, MD⁶; Cezmi A. Akdis, MD, PhD⁶; Hasan Arshad, MD⁶; Kirsten Beyer, MD⁶; Anthony Dubois, MD⁶; Philippe Eigenmann, MD⁶; Monserrat Fernandez-Rivas, MD⁶; Kate Grimshaw, PhD, RD, RNutr⁶; Karin Hoffman-Sommergruber, PhD⁶; Arne Host, MD⁶; Susanne Lau, MD⁶; Liam O'Mahony, MD⁶; Clare Mills, PhD⁶; Nikolaus Papadopoulos, MD⁶; Carina Venter, BSc, PhD⁶; Nancy Agmon-Levin, MD⁷; Aaron Kessel, MD⁷; Richard Antaya, MD⁹; Beth Drolet, MD⁹; and Lanny Rosenwasser, MD¹⁰

ARTICLE INFO

Article history:

Received for publication June 2, 2015.

Received in revised form June 3, 2015.

Accepted for publication June 3, 2015.

The purpose of this brief communication is to highlight emerging evidence to existing guidelines regarding potential benefits of supporting early, rather than delayed, peanut introduction during the period of complementary food introduction in infants. This document should be considered as interim guidance based on consensus among the following organizations: American Academy of Allergy, Asthma & Immunology, American Academy of Pediatrics, American College of Allergy, Asthma & Immunology, Australasian Society of Clinical Immunology and Allergy, Canadian Society of Allergy and Clinical Immunology, European Academy of Allergy and Clinical Immunology, Israel Association of Allergy and Clinical Immunology, Japanese Society

Abbreviations used: EAACI, European Academy of Allergy and Clinical Immunology; LEAP, Learning Early About Peanut Allergy; NIAID, National Institute of Allergy and Infectious Diseases; NNT, Number needed to treat; SPT, Skin prick test.

Corresponding author: David M. Fleischer, MD, Children's Hospital Colorado, 13123 E 16th Ave, B518, Aurora, CO 80045; E-mail: david.fleischer@childrenscolorado.org.

Published on behalf of the American Academy of Allergy, Asthma & Immunology; American Academy of Pediatrics; American College of Allergy, Asthma & Immunology; Australasian Society of Clinical Immunology and Allergy; Canadian Society of Allergy and Clinical Immunology; European Academy of Allergy and Clinical Immunology; Israel Association of Allergy and Clinical Immunology; Japanese Society for Allergology; Society for Pediatric Dermatology; and World Allergy Organization. Copublished in the *Journal of Allergy and Clinical Immunology*, the *Annals of Allergy, Asthma, and Immunology*, *Allergy, Asthma & Clinical Immunology*, and the *World Allergy Organization Journal*.

¹ American Academy of Allergy, Asthma & Immunology (AAAAI)

² American Academy of Pediatrics (AAP)

³ American College of Allergy, Asthma & Immunology (ACAAI)

⁴ Australasian Society of Clinical Immunology and Allergy (ASCIA)

⁵ Canadian Society of Allergy and Clinical Immunology (CSACI)

⁶ European Academy of Allergy and Clinical Immunology (EAACI)

⁷ Israel Association of Allergy and Clinical Immunology (ISACI)

⁸ Japanese Society for Allergology (JSA)

⁹ Society for Pediatric Dermatology (SPD)

¹⁰ World Allergy Organization (WAO)

¹¹ Rho Federal Systems Division, Inc

<http://dx.doi.org/10.1016/j.anai.2015.06.001>

1081-1206/© 2015 American College of Allergy, Asthma & Immunology. Published by Elsevier Inc. All rights reserved.

Key words:

Allergy prevention
complementary feeding
peanut allergy

for Allergology, Society for Pediatric Dermatology, and World Allergy Organization. More formal guidelines regarding early-life, complementary feeding practices and the risk of allergy development will follow in the next year from the National Institute of Allergy and Infectious Diseases-sponsored Working Group and the European Academy of Allergy and Clinical Immunology.

© 2015 American College of Allergy, Asthma & Immunology. Published by Elsevier Inc. All rights reserved.

Introduction and Rationale

Peanut allergy is an increasingly troubling global health problem affecting between 1% and 3% of children in many westernized countries. Although multiple methods of measurement have been used and specific estimates differ, there appears to have been a sudden increase in the number of cases in the past 10- to 15-year period, suggesting that the prevalence might have tripled in some countries, such as the United States. Extrapolating the currently estimated prevalence, this translates to nearly 100,000 new cases annually (in the United States and United Kingdom), affecting some 1 in 50 primary school-aged children in the United States, Canada, the United Kingdom, and Australia. A similar increase in incidence is now being noted in developing countries, such as Ghana.¹⁻⁶

The purpose of this brief communication is to highlight emerging evidence for existing allergy prevention guidelines regarding potential benefits of supporting early rather than delayed peanut introduction during the period of complementary food introduction in infants. A recent study entitled “Randomized trial of peanut consumption in infants at risk for peanut allergy” demonstrated a successful 11% to 25% absolute reduction in the risk of peanut allergy in high-risk infants (and a relative risk reduction of up to 80%) if peanut was introduced between 4 and 11 months of age.⁷ In light of the significance of these findings, this document serves to better inform the decision-making process for health care providers regarding such potential benefits of early peanut introduction. More formal guidelines regarding early-life, complementary feeding practices and the risk of allergy development will follow in the next

year from the National Institute of Allergy and Infectious Diseases (NIAID)-sponsored Working Group and the European Academy of Allergy and Clinical Immunology (EAACI), and thus this document should be considered interim guidance.

Summary of New Evidence

In the Learning Early About Peanut Allergy (LEAP) trial, 640 high-risk United Kingdom infants (see [Box 1](#)) between the ages of 4 and 11 months were randomized to consume peanut products at least 3 times a week (6 g of peanut protein, which is equivalent to 24 g peanuts or 3 teaspoons of peanut butter per week) or to completely avoid peanut products for the first 5 years of life. This included 542 infants found to have negative skin prick test (SPT) responses to peanut at study entry and 98 infants with SPT wheal diameters to peanut of between 1 and 4 mm (minimally positive SPT response) at study entry. An additional 76 children were excluded from study entry before randomization based on a SPT response of greater than 5 mm, which was assumed to result in a very high likelihood of reacting to a peanut challenge. In an intention-to-treat analysis 17.2% in the peanut avoidance group compared with 3.2% in the peanut consumption group had food challenge-proved peanut allergy by age 5 years, corresponding to a 14% absolute risk reduction, a number needed to treat (NNT; eg, the number of persons needed to be treated for one to receive benefit) of 7.1, and a relative risk reduction of 80%.⁷

When examined in further detail, the isolated beneficial effects for both the primary and secondary prevention of peanut allergy

Box 1. Enrollment criteria used in the LEAP trial**Infants considered at “high risk” as defined by the LEAP study criteria:**

Egg allergy: Children with either:

1. A SPT wheal diameter ≥ 6 mm from exposure to raw hen’s egg white and no history of previous egg tolerance

OR

2. A SPT wheal diameter ≥ 3 mm from exposure to pasteurized hen’s egg white and allergic symptoms related to exposure to hen’s egg

Severe eczema: An eczematous rash that:

1. Requires application of topical creams, ointments, or both containing corticosteroids or calcineurin inhibitors and that, if the participant is < 6 months of age, lasted for at least 12 of 30 days on 2 occasions or, if the participant is > 6 months of age, lasted for at least 12 of 30 days on 2 occasions in the last 6 months

OR

2. Is currently or was previously graded ≥ 40 by using the modified SCORAD evaluation

Example of SPT method used in the LEAP trial

- SPTs to peanut extract should be performed in the presence of a negative control and a positive histamine control.
- SPTs should be performed in duplicate, and the maximum wheal diameter of the 2 SPT responses should be calculated and rounded up to the greatest whole millimeter. Of note, in the LEAP trial measurement of IgE to peanut resulted in considerably higher rates of sensitization compared with skin testing, which could lead to numerous unnecessary oral peanut challenges.

Download English Version:

<https://daneshyari.com/en/article/6061942>

Download Persian Version:

<https://daneshyari.com/article/6061942>

[Daneshyari.com](https://daneshyari.com)