

100–300 $\mu\text{g}/\text{mL}$) was “ubiquitous in maternal and infant diet in Hong Kong in the past” but has now largely been replaced by olive oil.

METHODS. The consumption of various oils was estimated from data on imports. Per-capita consumption was calculated on the basis of population over time.

RESULTS. Per capita consumption of crude peanut oil fell ~ 30 -fold over the last 15 years, whereas consumption of olive oil increased ~ 30 -fold over the same time period.

CONCLUSIONS. It is gaining consensus that avoiding consumption of peanut abrogates development of oral tolerance and increases risk of hypersensitivity through cutaneous exposure. The timing and perhaps the dosage and the balance of cutaneous and oral exposure determine whether a child will have allergy or tolerance. Crude edible peanut oil contains immunogenicity-competent protein fractions that might deserve further studies on its implication on peanut-allergy prevention.

REVIEWER COMMENTS. The authors suggested that oral consumption of crude peanut oil (contaminated with peanut protein) might have been protecting infants in Hong Kong from peanut allergy by tolerizing them and that now, without this early enteral exposure, more are becoming sensitized through cutaneous or respiratory routes. This concept is consistent with data from other studies that suggest that early feeding of food proteins is protective against the development of allergy and that early feeding avoidance (which leaves only cutaneous or respiratory exposure) might actually cause allergy. The American Academy of Pediatrics no longer advocates delayed introduction of any food past 4 months of age. Prospective, blinded, randomized trials are underway to better characterize the relationship between route, timing, and dose of food exposure and subsequent development of allergy.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2011-2107X

John M. Kelso, MD
San Diego, CA

Maternal Consumption of Peanut During Pregnancy Is Associated With Peanut Sensitization in Atopic Infants

Sicherer SH, Wood RA, Stablein D, et al. *J Allergy Clin Immunol.* 2010;126(6):1191–1197

PURPOSE OF THE STUDY. To identify factors associated with peanut sensitization.

STUDY POPULATION. The study population included 512 infants aged 3 to 15 months with likely milk or egg allergy but no previous diagnosis of peanut allergy.

METHODS. Enrollment criteria included history of immediate allergic reactions to cow’s milk (and/or egg) and a

positive skin-prick-test (SPT) result to milk (or egg if the clinical reaction was to egg) and/or moderate-to-severe atopic dermatitis and a positive SPT result to milk or egg. This longitudinal study was aimed at observing the development of peanut allergy; therefore, children with a known peanut allergy or known peanut-specific immunoglobulin E (IgE) level of ≥ 5 kU of antibody (kU_A/L) before enrollment were excluded. Maternal ingestion of peanut was queried retrospectively. In categorical analyses, frequent maternal peanut ingestion was defined as ≥ 2 times per week. A peanut-IgE level of ≥ 5 kU_A/L was used as the end point to signify a high likelihood of peanut allergy.

RESULTS. The 503 participants from whom blood samples were obtained were included. At enrollment, 140 (27.8%) of the participants were found to have a peanut-IgE level of ≥ 5 kU_A/L . A peanut-IgE level of ≥ 5 kU_A/L was associated with sensitization to egg or milk, male gender, non-white race, and frequent maternal peanut consumption during pregnancy. There was a dose-dependent association between frequent maternal peanut ingestion during pregnancy or breastfeeding and a peanut-IgE level of ≥ 5 kU_A/L , but only consumption during pregnancy was a significant predictor. Of the 71 infants who were never breastfed, frequent peanut consumption during pregnancy was related to a peanut-IgE level of ≥ 5 kU_A/L .

CONCLUSIONS. Maternal ingestion of peanut during pregnancy was strongly associated with peanut sensitization in infancy.

REVIEWER COMMENTS. Dietary advice for mothers during pregnancy and lactation is controversial because of conflicting results from previously published retrospective studies. This observational investigation of young atopic infants provides evidence that frequent consumption of peanut (≥ 2 times per week) during pregnancy is related to peanut sensitization; however, the development of clinical peanut allergy was not determined. The American Academy of Pediatrics (AAP) previously recommended peanut avoidance for pregnant and lactating women; however, the lack of scientific evidence to support such recommendations led to their withdrawal of that recommendation in 2008. Currently, neither the AAP nor the National Institute of Allergy and Infectious Diseases (NIAID) expert panel recommends maternal dietary avoidance of any foods, including peanut. The development of clinical peanut allergy among this study’s cohort, as well as results of prospective investigations, will need to be examined before more definitive maternal dietary recommendations can be made.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2011-2107Y

Jennifer E. Petitto, MD
Tamara T. Perry, MD
Little Rock, AR

Maternal Consumption of Peanut During Pregnancy Is Associated With Peanut Sensitization in Atopic Infants

Jennifer E. Petitto and Tamara T. Perry

Pediatrics 2011;128;S107

DOI: 10.1542/peds.2011-2107Y

Updated Information & Services	including high resolution figures, can be found at: http://pediatrics.aappublications.org/content/128/Supplement_3/S107
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Allergy/Immunology http://www.aappublications.org/cgi/collection/allergy:immunology_sub
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.aappublications.org/site/misc/Permissions.xhtml
Reprints	Information about ordering reprints can be found online: http://www.aappublications.org/site/misc/reprints.xhtml

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Maternal Consumption of Peanut During Pregnancy Is Associated With Peanut Sensitization in Atopic Infants

Jennifer E. Petitto and Tamara T. Perry

Pediatrics 2011;128;S107

DOI: 10.1542/peds.2011-2107Y

The online version of this article, along with updated information and services, is located on the World Wide Web at:

http://pediatrics.aappublications.org/content/128/Supplement_3/S107

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2011 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

